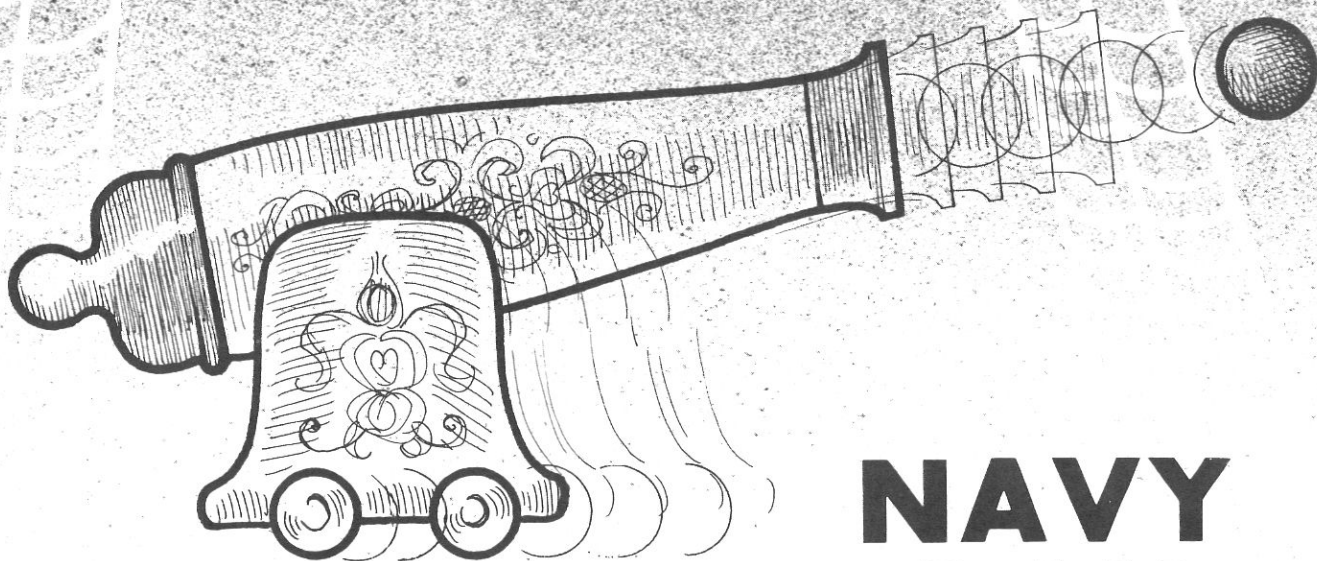




U. S.
NAVY

Medicine



**NAVY
DAY**
OCTOBER 27

"TRUE PEACE IS A STRONG NAVY"

Vice Admiral G. M. Davis MC USN
Surgeon General

Rear Admiral J. W. Albrightain MC USN
Deputy Surgeon General

Captain M. T. Lynch MC USN, Editor

Mrs. Virginia M. Novinski, Assistant Editor

Mr. James O. Woldahl, Managing Editor

Mr. Bruno J. Figallo, Art Director

Creative Artist . . . HM3 Michael A. Willhoite, USN

Graphic Arts . . . Mrs. J. L. Bottazzi

Contributing Editors

Legal . . . Captain R. E. Blair JAGC USN

Nurse Corps . . . Captain A. M. Byrnes NC USN

Dental Corps . . . Captain A. K. Kaires DC USN

Occupational Medicine . . . CDR G. M. Lawton MC USN

Aerospace Medicine . . . Captain H. S. Trostle MC USN

Preventive Medicine . . . Captain C. E. Alexander MC USN

Radiation Medicine . . . Captain B. K. Hastings MC USNR

Medical Service Corps . . . CDR J. M. Beckwith MSC USN

Submarine Medicine . . . Captain B. K. Hastings MC USNR

Research Medicine . . . Captain B. F. Gundelfinger MC USN

Amphibious & Field Medicine . . . Captain J. H. Stover, Jr. MC USN

Medical Corps and Gastroenterology . . . CDR D. O. Castell MC USN

POLICY

U.S. Navy Medicine is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry and allied sciences. The items used are neither intended to be, nor are they, susceptible to use by any officer as a substitute for any item or article, in its original form. The opinions and conclusions expressed in the articles or items included herein are those of the respective authors and do not necessarily represent the views of the Department of the Navy, the Bureau of Medicine and Surgery or any other governmental department or agency thereof.

DISTRIBUTION

U.S. Navy Medicine is distributed to active duty Medical Department officers via the Standard Navy Distribution List (SNDL) vice personal addresses. Any increase or decrease in the number of allotted copies should be requested via the local Commanding Officer through U.S. Naval Publications and Forms Center, Code 306, 5801 Tabor Avenue, Philadelphia, Pa. 19120. Other addressees may forward changes of address in the same manner, giving full name, rank, corps, old and new address, and zip code. The mailing label taken from the most recent issue should be forwarded if possible. See inside back cover for CORRESPONDENCE AND CONTRIBUTIONS.

The issuance of this publication approved in accordance with NAVEXOS P-35.

NAVMED P-5088

C O N T E N T S

FROM THE CHIEF 2

FEATURE ARTICLES

- Navy Day: The Quest for Peace Endures
196 Years 3
- The Military Physician and ICAF: To What
Purpose?.....10
- Reconstruction Surgery in Vietnam12

PROFESSIONAL PAPERS

- Environmental Aspects of the Hospital..... 6
- The Gastroenterologists' Corner —
Duodenoscopy18
- Dentistry Backwards: A Recommended
Reversal.....24
- Regional Infant Cardiac Program.....29

LETTERS TO THE EDITOR.....32

NOTES AND ANNOUNCEMENTS

- Wage-Price Freeze: DoD Yields Nearly
\$1 Billion 35
- Facts About Marijuana 36
- Notes From the MC Detailer 38
- Tonometer Cleaning 38
- Formulary Notes — Oral Penicillin..... 39
- Traveling Fellowships and Scholarships 39
- Dental Scholarships 40
- Belly Board Award to CAPT Wilson 40
- Share Your Journals 41
- Surgeon General Cited for Distinguished Service. . 41
- Vector Control Course 41
- Correspondence Courses 41
- Available Films 42
- Official Instructions and Directives..... 43
- Navy-Wide Workshop Concerning Helium Speech . 47
- Thirty-Day Habitability Study 47

Credits: All pictures are Official U.S. Navy Photographs unless otherwise indicated.

In honor of Navy Day, shotted salutes are being fired on the front cover skillfully designed and executed by HM3 Michael A. Willhoite, USN.

Page 2 photograph was taken on 4 August 1971 at the Camp Lejeune Naval Hospital following the Change of Command Ceremony. VADM George M. Davis, MC, USN, Surgeon General (right), assists the newly installed Commanding Officer CAPT P. O. Geib, MC, USN (left), in cutting the cake. CAPT R. M. Lehman, MC, USN (center), former XO Naval Hospital Camp Lejeune, subsequently departed to assume command of Naval Hospital Taipei, Taiwan.

For their able support in art work and photography, we are indebted to the Illustration and Exhibits, and Photography Divisions of the Medical Graphic Arts Department, Naval Medical School, NNMC, Bethesda, Md.

Continued assistance of the Graphic Arts Section, Code 4542, BUMED, is gratefully acknowledged.



from the Chief

Devoted students of history remind us that to err is pardonable. We are condemned by the failure to learn from our mistakes.

Through sea power, our young Nation emerged from the Spanish-American War as a world power. Awesome responsibility accompanied that transition. We were to learn that world power invites challenge and courts disaster; that it is expensive to maintain; that recurrent shifts in priorities weaken the resources required to preserve and modernize sea power; that lapses of diligence exact a very high price; and that there is a relentless obligation to employ world power responsibly.

In observing Navy Day on October 27, 1971, and the preceding Navy Sabbath weekend, we pay particular tribute to the host of predecessors whose service and sacrifice have fashioned the honorable tradition of our naval service. We do not take lightly the guardianship with which they have entrusted us. The opportunity to share this heritage with others is welcomed. By opening doors, and minds, and hearts, ugly spectres of destruction may be diminished by a greater appreciation of the overwhelming good and humane purpose toward which our technological skills are directed.

We reaffirm our own commitment. We are prepared to render whatever service our country may require of us. There is an implicit trust and faith in the honor of that service which has never been questioned. The question before us as a Nation is, "What price are we willing to pay for peace?"



NAVY DAY

THE QUEST FOR PEACE

ENDURES 196 YEARS



On 13 October 1775 the Continental Congress enacted the first naval legislation which gave birth to the Continental Navy. It was resolved that two sailing vessels be fitted out "with all possible despatch." The Continental Navy, the State Navies (small navies for local defense were owned by eleven of the colonial states), and the American Merchant Marine (privateers), combined efforts to face the potentially formidable sea-power of Britain. Of the three components, armed merchant ships were by far the most numerous and seasoned. Confronted by munitions shortages inflicted by British ships, General Washington ordered the creation of a Continental naval force soon after assuming command of the Army, acting under his general authority from Congress as Commander in Chief. The General outfitted the schooner HANNAH at Continental expense; the officers and men of Washington's "Fleet" were from the Army.

Acknowledgement: The courteous assistance of The Navy League of the U.S.; the Chief of Information, U.S.N.; and the Navy Department Library, Division of Naval History in providing documented copies of articles and correspondence related to this subject, is appreciated.

HANNAH put to sea on 5 September 1775, participating in military operations during the siege of Boston and local cruises.

On 27 October 1775, the Naval or Marine Committee of the Continental Congress presented a bill for the acquisition of five ships of 32 guns each, five of 28, and three ships of 24 guns each.

A uniform instruction was issued on 5 September 1776 which failed to mention petty officers or seamen. Captains were committed to uniforms of blue cloth with red lapels, slash cuff, stand-up collar, flat yellow buttons, blue breeches and red waistcoat, with narrow lace. Lieutenants' uniforms were to be blue with red lapels, round cuff, faced with red, stand-up collar, yellow buttons, blue breeches and red waistcoat, plain. Masters and Midshipmen were committed to blue lapelled coats with round cuffs, blue breeches and red waistcoats. Although epaulets were not provided for, the same order directed that Marine officers wear a silver epaulet on the right shoulder of their white faced, green coats. With the existing material shortages, many officers wore whatever was readily available and failed to conform to official instructions. A group of captains who



presumably disliked the prescribed uniform (John Paul Jones reportedly included), met in Boston in 1777 when they agreed upon a new uniform of their own choosing. Their choice so greatly resembled that of the Royal Navy, that British captains complained of the difficulty in distinguishing the American officers from themselves during contacts with Continental men-of-war.¹

The Naval Armament Act of 27 March 1794 was the first naval legislation under the Constitution of the U.S. This Act provided for the construction of four 44-gun frigates and two 32-gun frigates. The first vessel built under the Constitution was launched at Philadelphia on 10 July 1797. This 44-gun frigate was named UNITED STATES.

In August 1789 a law placed the Navy under the Secretary of War where it remained for nine years. In April 1798 a Navy Department was established under the control of a Secretary of the Navy. Government navy yards were established in 1800 and 1801. The "Board of Commissioners" was abolished in August 1842 and five bureaus were established under the Secretary of the Navy:

- (1) A Bureau of Yards and Docks
- (2) A Bureau of Construction, Equipment and Repair
- (3) A Bureau of Provisions and Clothing
- (4) A Bureau of Ordnance and Hydrography
- (5) A Bureau of Medicine and Surgery.

The foregoing items provide a simplified listing of

significant dates and events associated with the creation of the Continental Navy and the revival of the Navy in the 1790's.

Prudent attention to the timely development of a modern navy ensured our naval supremacy in the Spanish War. It did not go so well with General Shafter whose Army command was reinforced by the former Assistant Secretary of the Navy, Colonel Theodore Roosevelt. The Rough Riders fought bravely and sustained heavy casualties. With Admiral Dewey's naval victory at Manila Bay, the respected Spanish squadron under Admiral Cervera on 3 July 1898 lost all ships, 323 men killed and 151 wounded. The Americans lost one man killed and one man severely wounded.² On the following day the Americans rescued many of the Spaniards including Admiral Cervera. With the end of the war, the United States had acquired a new position as a world power. The value of a well prepared, superior Navy was surely demonstrated. Historians point out that what had initially seemed altruistic, to relieve the Cubans from Spanish oppression, had finally evolved as a war of conquest. From that standpoint, it has been frequently regarded with regret.^{2,3}

The political posture of the U.S. between the Spanish and World Wars was greatly influenced by President Theodore Roosevelt, an extremely able naval student and historian. With skillful use of diplomacy and naval strength, he promoted peace in the Orient, ultimate self-government for the Filipinos, the "Open Door" policy and observance of the Monroe Doctrine. Speaking of the 1902 Venezuelan incident when the Kaiser was persuaded to arbitrate, Roosevelt remarked that Admiral Dewey had been the greatest deterrent to war.

During World War I, a group of ladies led by Mrs. William H. Hamilton, operated a Navy Club for enlisted men of the Navy and Marine Corps in New York City. After the Armistice, through continued efforts of interested volunteers, a new site for the club was established between Fifth and Madison Avenues, the name was changed to "Manhattan Navy Club," and a permanent institution was established. In 1921, Franklin D. Roosevelt became President of the Manhattan Navy Club. In 1922, Mrs. Hamilton sought to raise additional funds for the Club by holding a Navy Day celebration in New York; to that end she requested cooperation of the Navy and called on the Assistant Secretary of the Navy, the Honorable Theodore Roosevelt, Jr. The date of October 27th was selected and Mrs. Hamilton's

original idea was expanded further.

The Navy League, a civilian organization founded to promote greater knowledge of the U.S. Navy, had been concerned with the growing pacificism in popular thinking of the day. The Executive Committee of the Navy League proposed that a nationally celebrated Navy Day be observed annually on October 27. The date was considered appropriate for two reasons: it was the birthday of the late President Roosevelt whose association with the Navy and the Navy League was so significant, and it was the anniversary of the day in 1775 when the first fleet to protect our Nation had been authorized.

In correspondence with the Acting Secretary of the Navy in August 1922, the Navy League President R.J. Kelley asked for the cooperation of the Navy and the Navy Department in the annual world-wide celebration of Navy Day on 27 October. Mr. Kelley enumerated some of the naval achievements which the Navy League desired to publicize at that time, such as the Navy's contribution to the success of the Limitation of Armament Conference, and to the development and aid of people during peace time. Acting Secretary of the Navy Theodore Roosevelt, Jr., heartily endorsed the proposal and directed that Navy Day be observed throughout the country with appropriate ceremonies, opening ships and stations to the public wherever possible. Secretary of the Navy Edwin Denby added his approval by a subsequent directive on 22 September. Navy Day in 1922 was a great success and the Navy League continued to sponsor this annual event thereafter.

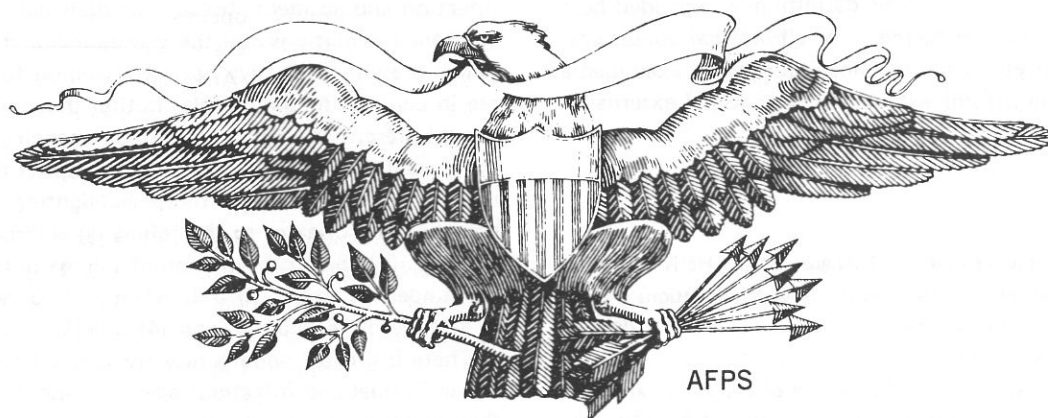
In 1949, however, Secretary of Defense Louis Johnson directed that "Armed Forces Day" be celebrated on the third Saturday in May, and that the official observance of any days in honor of individual services be eliminated. Navy Day was not observed therefore in 1949. Under President Dwight D. Eisenhower, however, official recognition was restored and Navy Day has been observed

annually on 27 October from 1950 to the present. Since founding this event in 1922, the Navy League has continued to sponsor and coordinate extensive activities which foster a better civilian understanding and recognition of naval endeavors. Since 1950 the official cooperation of Navy and Marine Corps activities in observing Navy Day on October 27 has been extended.^{4,5,6}

The theme of Navy Day for October 27, 1971, is: "True Peace is a Strong Navy." Commemorating the 196th anniversary of the U.S. Navy, the celebration will be observed throughout the week of 22-29 October. Participation of church services during "Navy Sabbath Weekend" on 22-24 October is being jointly sponsored by the Navy League and the Naval Reserve Association, and wearing of the uniform by those attending church services on that particular weekend is encouraged. The dedicated effort of enthusiastic Navy supporters who promote this annual observance deserves special mention. There are many worthy causes and interests — but their's is a labor of love.

REFERENCES

1. Uniforms of the U.S. Navy 1776-1898.
U.S. Government Printing Office: 1966 — 0 — 223-943.
2. The U.S. Navy in Action. J. Clagett. Monarch Books, Inc.; Derby, Conn., p. 134, June 1963.
3. A History of the United States Navy. D. W. Knox, Captain, USN. G. P. Putnam's Sons, New York, p. 375, 1936.
4. Naval Customs Traditions and Usage. L. P. Lovette, VADM, USN (Retired). U.S. Naval Institute, 4th ed., Annapolis, 1959.
5. Some Forgotten Naval History — The First Navy Day, 1922. J.R. Carney. U.S. Naval Institute Proceedings, 65:1441-1442, Oct 1939.
6. The Origin and History of Navy Day. LeRoy Whitman. Navy Magazine 11:42-45, Oct 1968. 🍷



Environmental Aspects of the Hospital

By LCDR David W. Fishel, MSC, USN;* *Environmental Health Branch, Preventive Medicine Division, Bureau of Medicine and Surgery, Washington, D.C.*

Environmental Aspects of the Hospital

The purpose of this review is to determine whether the hospital has unique environmental qualities and whether this environment can predictably be expected to benefit from the services of a trained environmentalist. Although a wide application of principles is possible, specific applicability of this paper is limited to hospitals.

Definition

"Environment," as defined by Webster, is "that which environs; surroundings; specifically, the aggregate of all the external conditions and influences affecting the life and development of an organism, human behavior, society, etc." This definition is expanded here to include also the aggregate of all *internal* conditions and influences so that the hospital may be examined as a system (organism) with both internal and external environments.

*LCDR Fishel retired on 31 August 1971. He is presently the Industrial Health Officer at the Nevada Operations Office of the U.S. Atomic Energy Commission, P.O. Box 14100, Las Vegas, Nevada 89114.

The views expressed are the opinion of the author and do not necessarily represent the official position of BUMED, the Navy Department, or the naval service at large.

Internal Environment

A model of the hospital's internal environment can be constructed by development of four components — patients, staff, facilities, and functions — all so inextricably interrelated in the ecological structure that removal or dysfunction of any one would result in dysfunction or complete collapse of the system. For example, the staff, facilities, and functions may be in perfect order but, lacking interaction with patients, the hospital must cease to exist. The compactness and essentiality of interaction of subsystems increases the possibility of undesired outputs and resultant disruption of ecological equilibrium.

The peculiarly susceptible condition of patients to infection and accidents because of their debilitated and weakened conditions and the procedures and practices which present distinctive hazards common to hospitals are in contrast to the popular notion that the hospital should present the safest, most life-enhancing environment attainable. Concern with the hospital environment is not new; in 1904 Florence Nightingale attributed hospital diseases to the following environmental factors: (1) the agglomeration of a large number of sick under one roof; (2) a deficiency of space; (3) a deficiency of ventilation; and (4) a deficiency of light.

There is greater opportunity for contact between the individual and infectious agents in the hospital than in the home or community. Patients are more susceptible than the general population, and there is

increased hazard because of the variety and virulence of organisms present. These conditions have led one author to conclude that "the modern hospital has potentials for disease and death (as well as health and recovery) which are probably far beyond any other human circumstance except the battlefield."

External Environment

The hospital's external environment—the community—furnishes essential inputs such as patients, staff, land, air, water, and supplies. Outputs to the community are primarily in the form of healthier individuals and wastes. Disposition of outputs in an undesirable fashion can: pollute air, land, and water; contribute to development of vectors and pests; produce disease in the general population or hospital staff, patients, or visitors; and, through causation of disease, develop an increased number of patients. It is evident that the hospital is not isolable from the community. Just as a single component of the internal structure cannot be isolated and continue to function, the hospital cannot survive if interactions with its community are severed.

Areas of Concern

Since certain environmental aspects such as food, water, plumbing, waste disposal, laundry, occupational hazards, ventilation, insect and rodent control, training in certain areas, housekeeping, and disinfection are commonly recognized as being within the scope of concern of the environmentalist, we are concerned here with determining whether they present unique potentials in this particular setting.

Food Service

Food service principles are the same for all public eating establishments but higher levels of cleanliness and hygiene are necessary in the hospital due to increased susceptibility of patients. Special problems are presented by water carafes, and patients who are isolated or have infectious diseases. Consider the various types of meals served—normal, various special diets, formulas, tube feedings, and nourishments; the method of serving—trays, dumbwaiters, trayveyors, hot and/or cold carts; and ponder the uniqueness of the hospital food service setting. The kind of operation, e.g. main/central kitchen, ward kitchen, cafeterias, snack bars, metabolic kitchens, bed service, etc., has a particular bearing on the potential hazards.

Water

Adequate potable water of high quality is essential, including provision for interruptions and disasters. Significant quantities of special types of water are also

required; certain functions demand sterility and others a particular mineral content at a specific level. Some patients may be unable to accept the usual water supplied because of its mineral content; others are not able to consume demineralized water if ion-exchange process is used.

Plumbing

The hospital's specialized plumbing lends itself readily to contamination of the water system through cross connections and, great as the disease potential from this source normally is, there is increased danger in the hospital due to the concentration of highly pathogenic wastes in the sewerage system. One case of autopsy washings coming through a hospital drinking fountain has been reported, and another report indicates that an installation to prime a sewage pump resulted in the pumping of sewage directly into the hospital's potable water supply system.

Commonly encountered items of equipment, e.g. sterilizers, dishwashing machines, refrigerators, and food preparation equipment, are readily recognized potential problems. Sitz baths, bedpan washers, autopsy tables, and hydrotherapy units are also capable of creating cross connections and are often overlooked.

Waste Disposal

Concern with waste disposal begins in the patient area. Bathtubs, lavatories, and laundry trays are not suitable facilities for emptying or washing bedpans. Solid wastes usually are moved by carts but some hospitals use gravity chutes, pneumatic tubes, or pulping systems. Regardless of the variations, special problems are presented by the infectious nature of the material: waste chutes contribute to airborne contamination; infectious dressings and material must not be permitted to contribute to a spread of disease within the community; and disposable products such as syringes, exam gloves, catheters, emesis basins, and petri dishes pose safety problems and legal implications in municipal collection. In most cases, incineration or some other process approved by the local health officer is required by law for disposing of infectious and surgical dressings and similar material, but the current emphasis on air pollution is resulting in a decline in the use of incinerators. Consequently, hazards are now confronting many communities.

Each area of the hospital produces predictable waste products. The administrative area produces paper goods; food service produces contaminated garbage which may be transported throughout the hospital; obstetrics and surgical units yield dressings, sponges, placentas, waste ampules, silver nitrate capsules,

needles, syringes, masks, drapes, sanitary napkins, blood lancets, catheters, colostomy bags, enema units, diapers, underpads, gloves, etc. Other areas which make special contributions include the Emergency and Medical departments, isolation rooms, nurse's stations, service areas, the laboratory, morgue, pathology, and autopsy rooms. Either solid or liquid wastes may issue from these areas and they may be infectious, corrosive, explosive, or radioactive.

The laundry function permeates the entire hospital and is in close continual contact with patients. Handling of soiled linen should be minimized; contact between clean and dirty linen is to be avoided; work flow should provide movement from dirty to clean areas; special care of linen from patients with communicable disease is necessary; nursery linens should be washed separately and sterilized; and linens used in conjunction with radioactive materials should be segregated and monitored outside the laundry. Sorting of soiled linen should be avoided unless it is autoclaved first.

Heat and Ventilation

Disease transmission potential by, with, and through ventilation, heating, and air-conditioning systems is very significant. Airborne transmission as a means of dissemination of infectious agents from lesions, secretions, carriage sites, and the environment has been incriminated in direct transmission; ventilation systems have been found to draw heavily contaminated air directly into the operating room; and air movement due to ventilation and air-conditioning systems has great significance in controlling the spread of infections. The concept of differential pressures is recognized and applied in areas such as operating rooms, nurseries, and laundries; higher pressure is maintained within the controlled area so that air movement is outward. Air should not be recirculated to high risk areas such as operating rooms, nurseries, burn dressing rooms, and wound treatment rooms.

Occupational Hazards

As in other industries, certain occupational health hazards are related to hospitals. For purposes of this report, both patients and staff comprise the occupational group at risk. It is obvious that exposure of patients to hazards is greater than in a more conventional occupational setting because of the 24 hour/day exposure and the greater intensity of exposure due to clinical procedures. Certain categories of patients and certain diagnostic and treatment procedures increase the risk of infection for example.

Radioisotopes are becoming increasingly important. Several forms of materials are available and each

presents a different handling problem. Wherever used, special precautions are required to prevent danger to patients, physicians, technical personnel, nurses, other hospital personnel, and the public. The radioisotope program is not rigidly separate from normal routine; patients are not always isolated; laundry becomes contaminated; some material enters the plumbing system; housekeepers may be exposed in certain cleaning areas; nursing problems arise in connection with vomitus, urine, dressing changes or disposal, incontinence, and drainage problems; and space between patients becomes increasingly important. Radiological survey of patient treatment areas, wastes, and the radiological laboratory is indicated. Bacteria in slime in the drains will concentrate radioactivity; radioactive cadavers require special handling; and contaminated linen should not be released to the laundry.

Pathogenic wastes from treatment rooms, burn dressing rooms, laboratories, autopsies, and sputum cups and tissues from active tuberculosis cases present occupational risks as do: certain chemicals, equipment, and machinery; task procedures; handling and storage of bleaches, acids, and alkali solutions; and electrical equipment. Modern machinery and techniques are increasing electrical hazards in hospitals.

The laboratory contributes its share of problems: toxic odors; flammable or explosive chemicals; hot beakers, flasks, casseroles, and evaporating dishes; pipetting procedures (poisonous, corrosive, or infectious liquids); spattering chemicals and flying particles; gas cylinder explosions; acids (corrosive chemicals); toxic vapors and fumes, dust, and smoke. Ether and many ether compounds form peroxides over a period of time which are heat- and shock-sensitive explosives.

Insects and Rodents

Particular consideration must be given to environmental control of insect and rodent vectors and pests because of the increased disease-transmission potential in the hospital. Control techniques are significantly different from those generally employed because of special problems presented by nurseries, infant formula rooms, operating rooms, and patients.

Housekeeping

Good housekeeping is recognized for its profoundly beneficial effect on the mental and emotional well-being of both patients and staff. Ease of cleaning is an important architectural consideration, and American Hospital Association registration requires basic standards of cleanliness. More strict attention to bacteriological effectiveness is indicated in the hospital than in any other environment. Cleaning schedules, techniques,

and equipment require regular consideration.

In the realm of disinfection and sterilization, consideration must include physical, chemical, and mechanical methods as well as gaseous sterilization and radiation. Everything possible should be autoclaved. Inadequacy of disinfectants can generally be attributed to misuse but, for optimum results, some degree of sophistication in application of testing techniques and procedures is required.

Sanitation training is required for food service personnel, laundry workers, laboratory workers, nurse's aides, and occasionally others. Such training should also be afforded housekeeping personnel and is essential for insect and rodent-control employees. Fire prevention and protection training is a function of the safety program and a radiological safety educational program is required if radioisotopes are used in the hospital. Again, program requirements are oriented toward the primary concern—the patient—and all training must center on his welfare.

While not necessarily the index of the total environmental status, microbiological hazards are extremely important. Adequacy of the environmental control program can be partially gauged with a continual bacteriological surveillance program. Despite certain limitations, practically attainable levels of cleanliness have been developed and can serve as goals until the developmental phase of a local environmental control program is completed.

Role of the Environmentalist

The need for a functioning environmentalist in the hospital system is clearly demonstrated. Certain capabilities are obviously essential in facing the task of evaluating a hospital's environment and preparing, implementing, and directing a program to enhance that environment. There must be concern with both internal and external ecologies; thus emerges a prime function as program coordinator. The environmentalist must aid in: interpreting directives and

standards; planning and conducting in-service training programs; and formulating working rules for the institution. Plainly, the environmentalist must be of sufficient professional stature to deal with other professional groups in the hospital. Familiarity with a wide range of interdisciplinary concerns is essential for effective performance. In addition to a basic generalized background, supplementary training specifically in hospital environmental factors is necessary. Some degree of experience is desirable, primarily to develop the ability to work with people.

Environmental Health/Sanitation Officers augmented by Preventive Medicine Technicians are the natural choice to fulfill this hospital environmentalist function within the Navy. These individuals have the requisite basic knowledge, have demonstrated their trainability, have or can rapidly obtain the necessary experience, and are accustomed to working in the professional health system. They are specialists in controlling the environment for better health.

Economically, the desirability of a staff environmentalist is beyond question. The potential improvement just in the areas of accident prevention and hospital-acquired infections indicates not only the desirability of but the necessity for an environmental control program. The concept of bringing the sanitarian into the hospital is not new. Many hospitals have established staff positions for a full or part-time environmental control specialist. The fundamental problems of hospitals are not new or unfamiliar; the unique aspect lies only in the setting.

The environmentalist should be organizationally placed with freedom and authority to cross departmental lines. Proper organizational placement will provide for effective daily working relationships and permits more rapid response to emergency situations. The environmentalist seeks to improve biological, physical and social components of the hospital system. By coordinating hospital functions with the external environment, he further contributes to the mutual benefits shared by the community and the hospital. ☛

**"Without a decisive Naval force, we can do nothing definitive
— and with it everything honourable and glorious."**

—George Washington ☛

The Military Physician and ICAF^{*}

To What Purpose?

*By CAPT Daniel C. Good, MC, USN,** Assistant Fleet Medical Officer,
Commander in Chief Pacific Fleet.*

The transition from physician-practitioner to physician-administrator is traumatic. The new administrator is not comfortable in his new managerial chair and he misses the reward of a patient's thanks. The practitioner must be trained to accept his new administrative responsibilities. Instead of dealing on a one-to-one, patient-physician relationship the new administrator will find he has become the manager of numerous medical and paramedical-sensitive individuals. He is expected to advise several highly intelligent laymen of the medical requirements and expected medical results of proposed military operations. He does not need to know how to manage troops, ships or aircraft squadrons, but he does need to know how to manage people.

The reward which a physician seeks for his effort lies far beyond the monetary consideration alone. The satisfaction transmitted by a grateful patient and the warm feeling engendered by the knowledge that an individual person has been helped does much more to enhance self-respect than gold in the purse. This aspect of fulfillment will be diminished in his new position. A physician can fall into a narrow rut in medicine. The more specialized he becomes and the deeper he digs into clinical practice, the deeper his rut becomes. Research provides an even more insulated view of life. Medical officers are sometimes reluctant to climb out of a

comfortable, rewarding clinical rut and alter a life pattern.

The military physician has been notoriously "non-reg." He knows little of his own service and practically nothing of the other uniformed services. Today a brief indoctrination is provided for a new medical officer. That is a fine way to begin a career, but that indoctrination needs periodic reenforcement. It is possible for hospital practice to isolate the medical officer from the primary mission of his military service. Keeping the serviceman and his dependents free from disease is not the only objective. If so the doctor should never permit a ship to sail or a plane to fly. It is never medically judicious for a man to risk his life in battle, but such may be the man's military mission. The military physician must consider the military objective and plan his medical activities accordingly. The senior medical staff officer or hospital administrator must be foresighted enough to anticipate the medical consequences of a military operation and develop medical logistic plans to cover the possible needs contingent on the situation. He must appraise the cost-effectiveness of the operation from a medical viewpoint and relate his conclusions to his commander. He should be able to speak the language of the line and supply officers. He must be as fully aware of the resources available to the entire task force as he is of the limitations of his meager pharmacy.

When the transition from clinical practice to staff administration is approached, it would benefit the

^{*}The Industrial College of the Armed Forces

^{**}CAPT Good recently completed the course of instruction at ICAF.

military physician and his service to afford him a period of training with his contemporaries from the other services, together with officers and civilians of other disciplines. The Industrial College of the Armed Forces (ICAF) provides just such a period of training.

ICAF is one of two senior colleges at Fort Leslie J. McNair, Washington, D.C. These schools are sponsored by the Joint Chiefs of Staff — not by one of the services — and are thus oriented toward Unified Command Staffs. The National War College is more devoted to tactical and strategic planning for military forces. The mission of ICAF may be summarized as follows:

To conduct graduate level courses of study in national security with emphasis on management of national resources under current and predicted environments. Such studies will include both national and world interrelated military, economic, political, scientific, and social factors, with the objective of enhancing the preparation of selected military officers and civilian personnel for positions of high trust in the national and international security structure.

The ten-month resident course at ICAF is devoted to lectures, seminars, simulations and field trips. Emphasis is placed on economics, theory of management and political science. In addition to the basic courses, elective courses are chosen by the student consistent with individual interest and level of education. The courses are not designed to create economists or politicians, but rather to familiarize participants with the problems facing our country.

The year at ICAF is not the sabbatic often supposed by the uninitiated. The required reading is voluminous and speed-reading becomes as second nature as breathing very early in the year. Lengthy written and oral reports are expected to be correct in form, content, grammar and originality.

In addition to didactic instruction, and considered by most students to be equally important, there is the association with officers and civilians from other services. Prejudice is altered by familiarity. Students find men from other services to be loyal, dedicated, knowledgeable and concerned with unique problems not widely appreciated. Civil servants are not all sloths riding on the coattails of the military.

The guest speakers are men of renown. Names read in the newspaper take on faces and personalities. Impressive in their wisdom, they are found to be approachable humans, subject to faults and limitations.

No subject directly related to medicine is taught at ICAF, but every subject is indirectly related to it —

economics and management of business, the problems of human relationships and human behavior, logistics, and the effects of industry on our Nation's environment. No one could logically withhold birth control after the study at ICAF of the world's population crisis. Our selective service statistics show that over 50% of draftees were rejected because of mental or physical disabilities. Preventive medicine may improve this natural resource.

Some students take additional courses requiring seven additional weeks in residence at ICAF, and higher level elective courses in order to obtain a Master of Business Administration (MBA) degree from George Washington University. Some institutions of higher learning do not recognize this degree. Courses required for the degree program are so time consuming that basic courses are often neglected. Some students drop out, after commencing the degree program, because they feel they are losing the benefits of the regular course. It is not usually recommended that a student attempt the degree program.

The Army has a long list of eligible officers vying to attend a senior service college. It is almost a prerequisite for promotion to Brigadier General to attend one of the senior schools. Only those officers who are being considered for command and high staff positions are selected to attend a senior service college. ICAF is currently considered to provide the best source of future leaders. It would be criminal to send an officer to any service school simply because there wasn't another billet readily available. It is estimated that to send each of the 180 students to the ICAF resident school costs the government some \$50,000. Selections should be made within the context that the government and the country will be benefited by having a particular student attend ICAF.

ICAF will help the military physician to make the transition from clinical practice to administration. The resident course will fill the gaps in his education in the areas of economics, management and political science. It will help him climb out of the rigidly confined medicine rut and prepare him to assume the even greater responsibilities of command. The new acquaintances from other services will combine to improve his understanding of joint military operations and make him an informed physician of greater value to his country. A physician should regard the opportunity to attend ICAF as an honor bestowed on only a chosen few. ICAF can be a key which unlocks the door to a more stimulating and dynamic future for the military physician. ☸

Reconstruction Surgery In Vietnam

By CDR Martin L. Fackler, MC, USN, Chief of Surgery,
U. S. Naval Hospital Yokosuka, Japan.*

This is a brief report of five reconstructive type surgical cases chosen from more than 100 such cases performed by the author on civilian Vietnamese. The surgery was done during the period from December 1967 to December 1968 while the author was stationed at the Naval Support Activity Hospital in DaNang, R.V.N., as a staff general and plastic surgeon. About one-half the cases were done at NSA Hospital and the rest were treated aboard the German Red Cross Ship HELGOLAND in DaNang harbor.

Since the principal mission of the former NSA Hospital was the care of military casualties, it should be emphasized that the surgical treatment of civilian Vietnamese was accomplished strictly on a time and space-available basis. Most of the reconstructive cases had to be canceled and rescheduled at least once due to arrival of unexpected battle casualties.

The HELGOLAND was staffed by a most impressive group of knowledgeable and dedicated physicians,

nurses, and technicians, including a general surgeon and an anesthesiologist. It was a spotlessly clean and most efficiently run hospital where the quality of patient care was excellent.

Case I

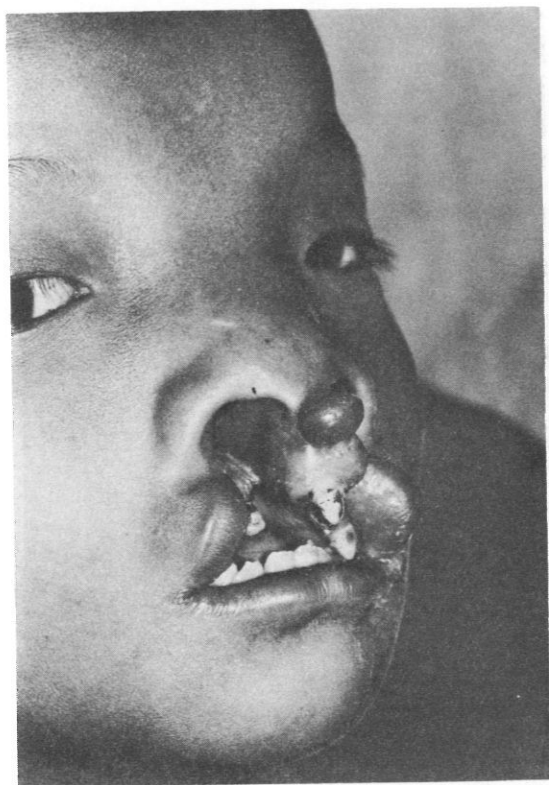
This eight-year-old boy presented a wide congenital bilateral cleft lip and palate with marked protrusion of the premaxilla.

In order to set back the premaxilla in line with the dental arch and make possible a repair of the cleft lip, a section of vomer bone was removed and the premaxilla was fixed in the corrected position with a Kirschner wire. Mucoperiosteal flaps were elevated from the sides of the premaxilla and sutured to similar flaps raised from the lateral segments of the dental arch. The bilateral cleft lip was then repaired using a modified LeMesurier quadrilateral flap technique. The cleft palate was repaired at a later time.

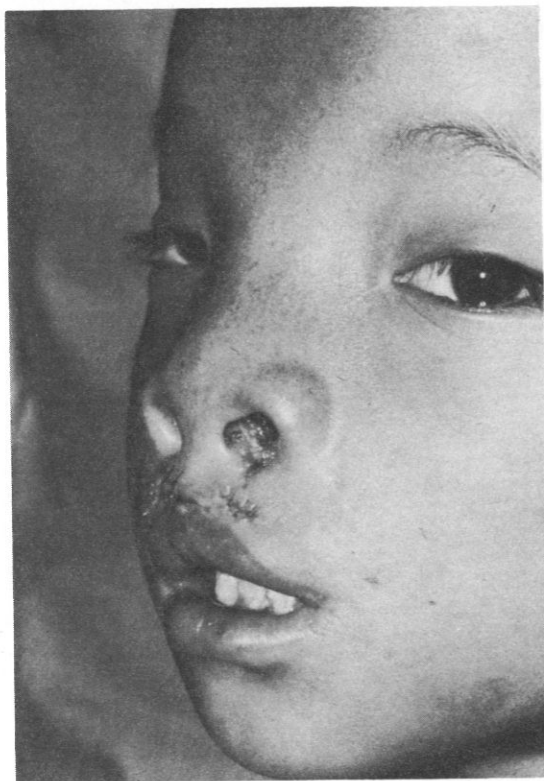
Case II

This 11-year-old girl presented a congenital partial unilateral cleft lip deformity. The defect was repaired using the Millard rotation-advancement technique.

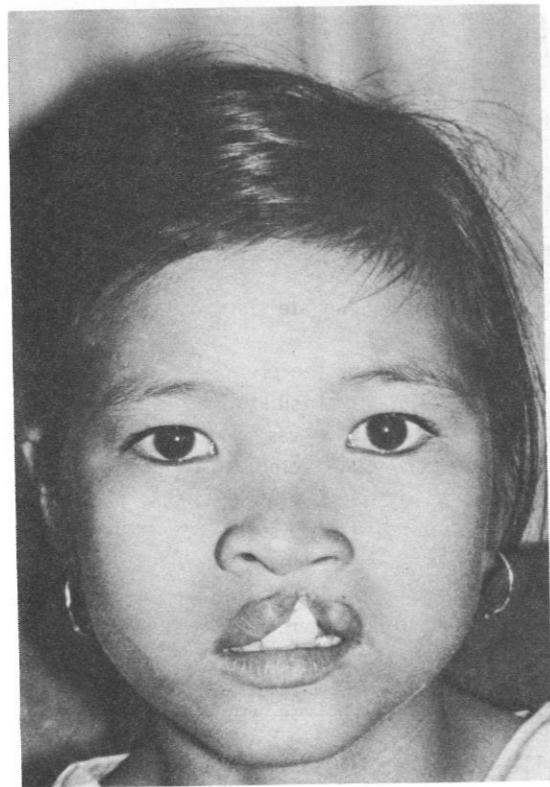
*CDR Fackler was previously a member of the staff at the former NSA (Naval Support Activity) Hospital in DaNang, R.V.N. The present paper reflects some of the surgical work in which he engaged at that hospital. We think you will agree that the photographs are quite remarkable.



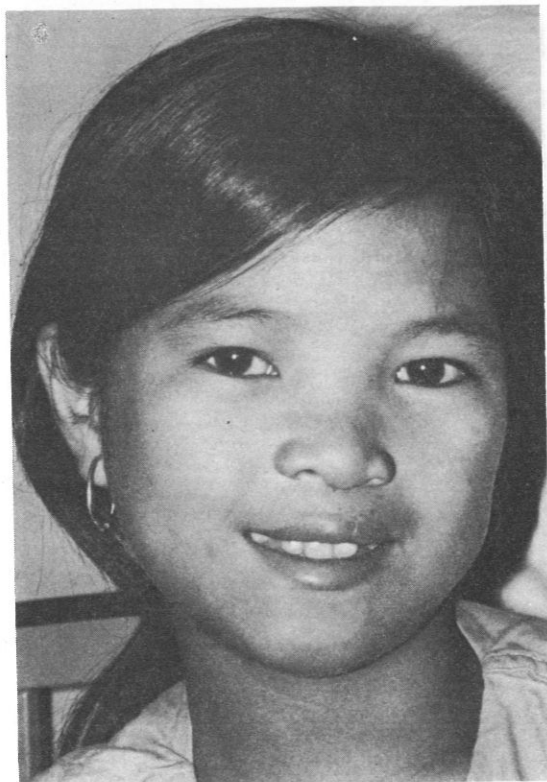
CASE I. Bilateral cleft lip and palate.



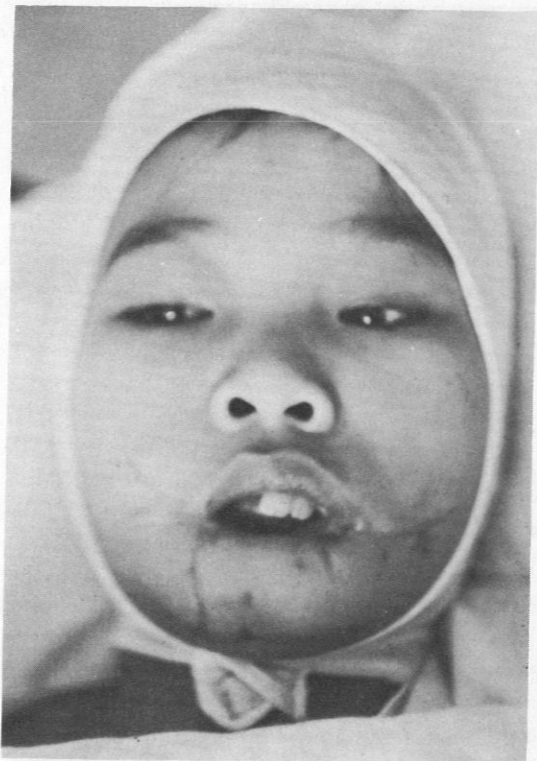
Postoperative view of Case I.



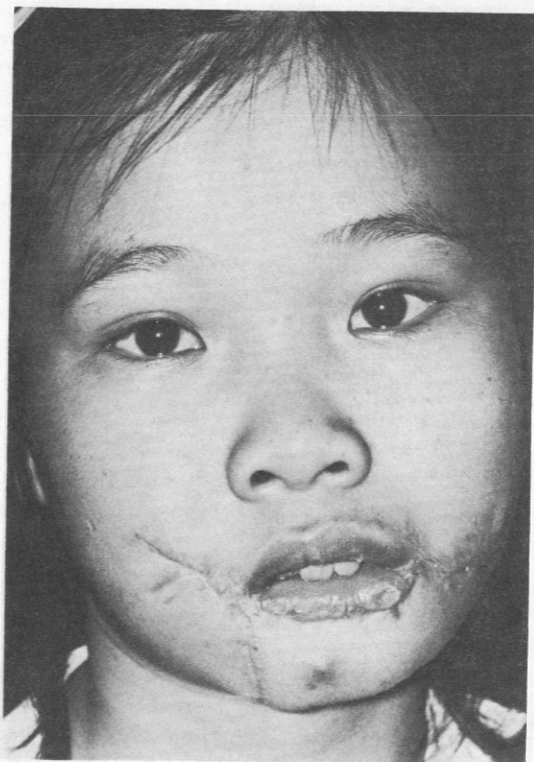
CASE II. Unilateral partial cleft lip deformity.



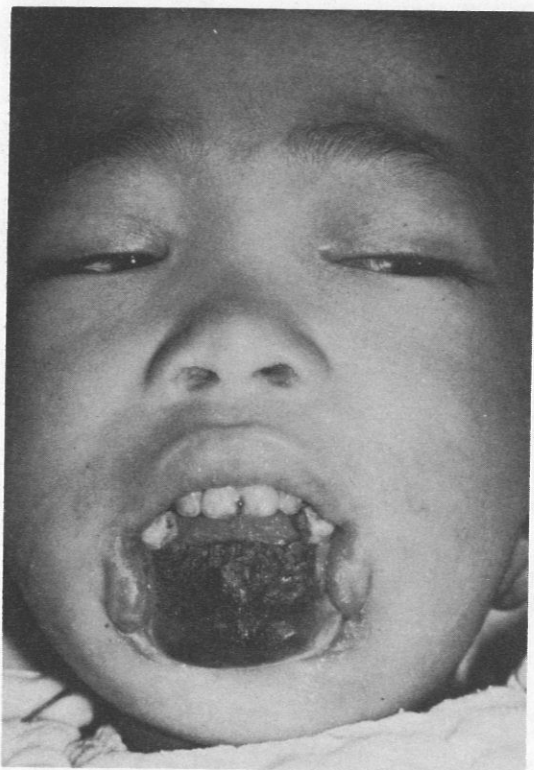
Postoperative view of Case II.



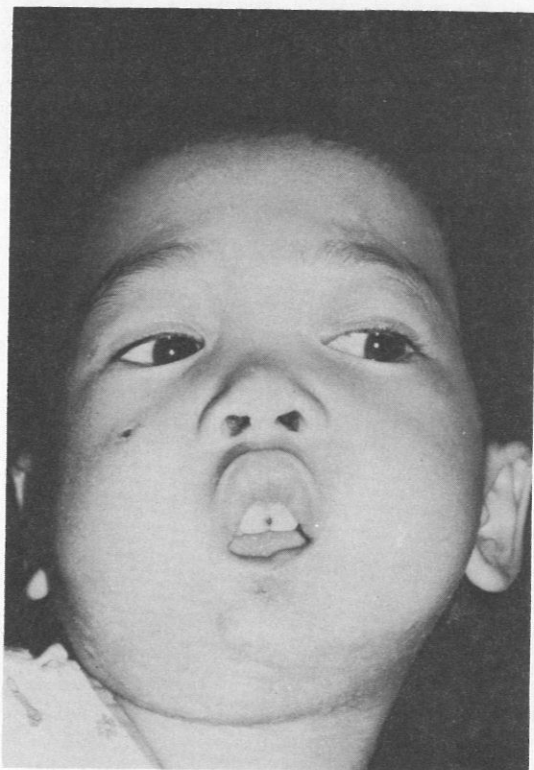
Preoperative view of CASE III.



Postoperative view of Case III. Absent lower lip has been replaced using pedicle flap from tongue.



CASE IV. A case of NOMA. Note destruction of lower lip and necrosis of central portion of the mandible.



CASE IV. Postoperative view after rotation of flap from submental area.

Case III

This ten-year-old girl had suffered severe facial trauma that resulted in loss of the entire lower lip about one year prior to her corrective surgery. Drooling of saliva was a major problem.

In order to replace the necessary bulk and create something resembling a lower lip, a pedicle flap was elevated from the edge of the tongue and sutured into the remaining bed by excision of a large amount of scarred mucosa from the buccal sulcus.

After three weeks the pedicle was intermittently compressed, using a rubber band and hemostat, for increasing intervals of time until the flap could tolerate this interruption of its blood supply without becoming cyanotic. Then, four weeks after the initial surgery, the pedicle was divided and inset to complete the formation of a lower lip.

Postoperatively she was able to close her mouth with ease and there was no further drooling of saliva.

Case IV

This three-year-old girl was seen about four months after the beginning of a necrotizing process involving the entire lower lip, chin, and underlying mandible.



CASE V. Presents necrosis of upper lip and a portion of maxilla due to noma.

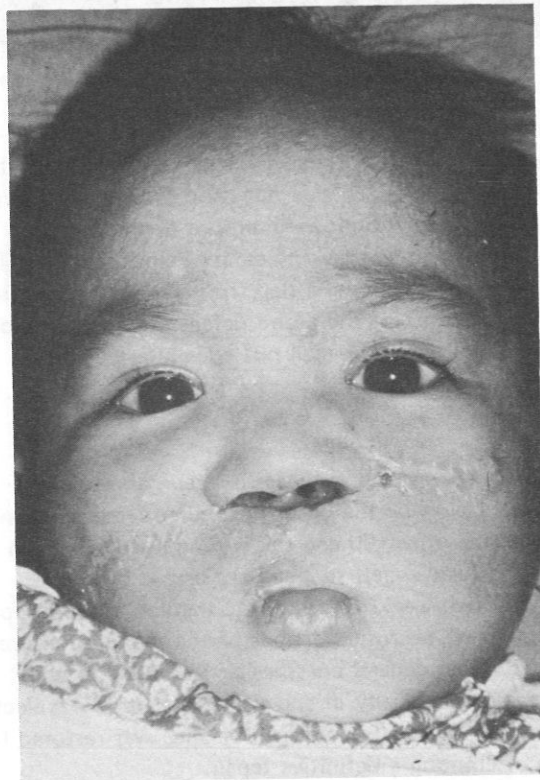
The lower teeth had already exfoliated from the necrotic portion of mandible. There was constant drooling of saliva and a foul odor.

The disease process was thought to represent NOMA, sometimes called cancrum oris, a rapidly progressive gangrenous stomatitis that usually occurs in young debilitated or malnourished children. This disease is very rare in the United States and all of the large series reported are from Africa and Asia.

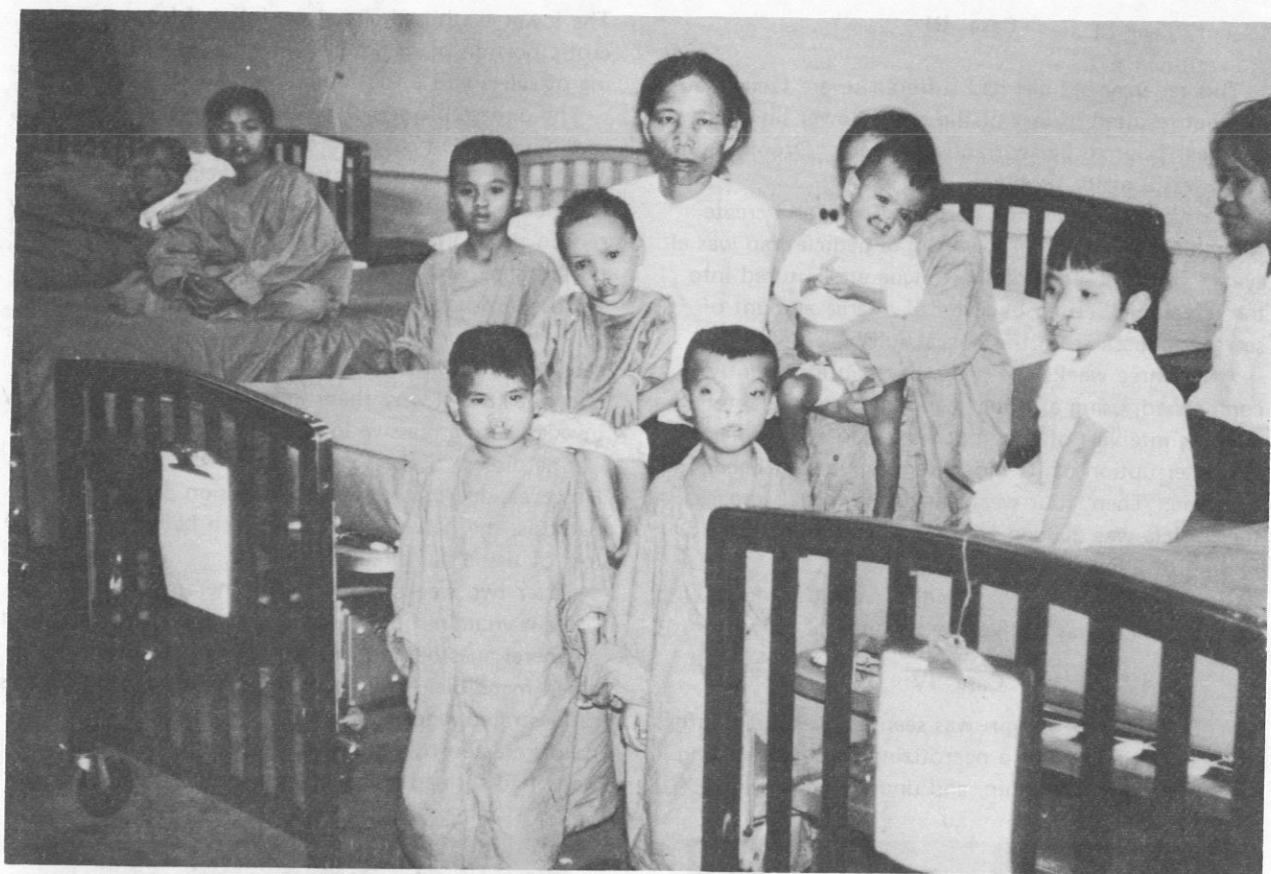
Fusiform bacilli in combination with *Borrelia vincenti* and other spirochetes have been implicated as the cause of NOMA. Often found as benign normal flora, it is not known why these microorganisms occasionally invade causing massive local tissue destruction.

The disease process can be arrested with antibiotics. However, due to the rapid progression of the tissue necrosis, the patients are rarely seen before irreversible loss of tissue has already occurred.

After two weeks of antibiotic therapy and a high-protein vitamin-supplemented diet, this child was given a general anesthetic during surgical removal of the diseased mandible. The necrotic portion of mandible was sequestered, and healthy granulation tissue lined the cavity created by removal of the bone. Also, new bone had formed and there was no problem with



CASE V. Postoperative view after closure of the defect with bilateral rotation — advancement flaps.



Six cases of congenital cleft lip and one NOMA — all inpatients at the former NSA Hospital DaNang.

occlusion of the molars. It was decided to approximate the lower lip primarily, since about 2 cm. of the lip remained on each side but were drawn downward out of position. Following closure of the lower lip there remained a large oval defect below the lip. This was closed by rotating a flap from the submental area. Primary closure of the entire defect provided freedom from drooling and a small but adequate mouth.

Case V

This two-year-old girl was first seen about two months following the onset of a necrotizing process involving the upper lip and underlying maxilla. As in case IV this was felt to represent a case of noma.

After two weeks of antibiotic therapy and appropriate diet, the necrotic portions of the maxilla were removed under general anesthesia. Because this child appeared chronically ill and malnourished it was elected to wait until positive nitrogen balance was restored before attempting a definitive repair.

One month later the child appeared healthy and had achieved satisfactory weight gain. The open area that remained following removal of the necrotic maxilla was

clean and lined with granulation tissue. A one-stage repair was then performed employing bilateral rotation-advancement flaps from the cheeks to form a bridge of tissue separating the nose and mouth. This technique resulted in medial rotation of the angles of the mouth and made it possible to approximate the remaining vermilion border to form an upper lip with mucous membrane lining.

Cases III and IV were treated aboard the *HELGOLAND* with the able assistance of Dr. Hans C. Muchler, now of Hamburg, Germany. Dr. Muchler was also responsible for most of the excellent preoperative and postoperative care which contributed greatly to the success of the surgery.

The language and cultural barrier presented a problem in caring for the Vietnamese patients, even with the advantage of apparently adequate interpreters. An example of this type of problem is reflected in the postoperative course of a young girl from whom a highly malignant tumor of the nose had been removed. Subsequent arrangements for radiation therapy in Saigon were made. On about the fifth postoperative day the parent removed the patient from the hospital thus preventing transfer to Saigon for irradiation and

the only hope of a cure. Six months later the patient was returned with widely disseminated metastatic tumor.

Because any given patient might be abruptly removed from our care at any time, it was generally elected to do the simplest most direct procedure consistent with an acceptable result. This philosophy was applied in cases IV and V where it might be argued that the staged migration of distant tissue via tubed pedicles

would have been the preferable approach to the replacement of such large perioral defects.

On the battlefields of Vietnam 1968 was a busy year. NSA Hospital was by far the most active medical facility in I Corps at that time. Those who used what free time they had to care for the civilian Vietnamese gained a great deal in professional satisfaction and experience by exposure to the many challenging and unusual problems that prevailed. 🇺🇸



VADM George M. Davis, MC, USN, Surgeon General (left), presented the Meritorious Service Medal to RADM Francis J. Fabrizio, DC, USNR-R at his retirement ceremony on 7 July 1971. Admiral Fabrizio retired from the Naval Reserve after 35 years of service to the Dental Corps both on active and inactive duty. He will now serve as a member of the Dental Advisory Committee of the U.S. Dept. of Defense. 🇺🇸

THE GASTROENTEROLOGISTS' CORNER

DUODENOSCOPY

*By LCDR Otto T. Nebel, MC, USN; Gastroenterology Branch,
Medical Service; Naval Hospital, Philadelphia, Pa.*

Introduction

The technique of gastrointestinal endoscopy dates back at least 150 years when Bozzini attempted to view the esophagus using a hollow tube through which the light of a candle was projected. In 1873 Kussmaul, using the same technique passed an open-ended tube into the stomach of a professional sword swallower, and was the first to endoscopically visualize the gastric mucosa. Unfortunately, since most patients requiring endoscopy were not professional sword swallowers, early attempts at rigid tube endoscopy were associated with a very high morbidity and mortality. Because of these complications, rigid tube endoscopy was practiced at only a few centers until this century, when the technique was repopularized in the U.S. However, despite improvements in technique that decreased both morbidity and mortality, gastrointestinal endoscopy remained an operating room procedure.

The introduction of the semirigid esophagoscope and gastroscope brought the technique of endoscopy from the operating room to the gastrointestinal clinic where it was greeted enthusiastically by the gastrointestinal endoscopist, but enjoyed only limited acceptance by most clinicians. The problems that prevented its widespread acceptance included incomplete examination,

lack of photographic or histologic verification of the disease observed, and the general fear of trauma.

In the last decade the field of gastrointestinal endoscopy has been revolutionized by development of a wide variety of fiberoptic endoscopes. These instruments offer flexibility and light handling properties that allow complete examination, photographic documentation, direct vision biopsy, and marked improvement in patient acceptance. The development of these instruments was preceded by several major advances in the field of fiberoptics.

Fiberoptic Technology

The transmission of light around curves by multiple internal reflections was first demonstrated in 1870 by John Tyndall, a British physicist. In 1928 Baird, in England, obtained the first patent on image-carrying fiberoptic bundles, and in 1930 the first working model was produced. Van Heel (1954) showed the importance of coating the individual fibers with a material of lower refractive index to reduce light loss and increase image resolution. Hopkins and Kopany (1954) described a technique for fabricating fiber bundles, and Curtiss and Peters (1957) developed a technique for producing these bundles with glass fibers of uniform size.

These advances led to the development of the first successful instrument — a fiberoptic gastroscope. The first clinical report of the new gastroscope appeared in 1958,¹ and was followed in 1963 by the report of a

The opinions expressed herein are those of the author and cannot be construed as reflecting the views of the Navy Department or of the naval service at large.

flexible esophagoscope.² Since these preliminary reports, numerous articles have documented the clinical usefulness and safety of these instruments. Today esophagoscopy and gastroscopy have become routine procedures in the evaluation of upper gastrointestinal disease.

The application of fiberoptics to instruments designed specifically to visualize the duodenum and colon began in the 1960's and recent reports indicate that their development has reached a level of clinical usefulness. This paper will review the development and current status of duodenoscopy.

Duodenoscopy

The history of duodenoscopy dates back to the original fiberoptic endoscope which was introduced in 1958 as a "Gastroduodenal Fiberscope." The original model featured complete flexibility except for the tip which housed a lamp and distal lens. The image illuminated by the lamp was focused by the distal lens on a fiberoptic bundle 5 mm in diameter and containing 200,000 separate fibers. Each fiber transmitted a fraction of the

image which was then magnified and observed through the proximal eyepiece. Not long after its introduction, modifications were made that further increased the usefulness of the fiberscope. These included the use of fiber bundles for both illumination and viewing, which permitted a smaller and more maneuverable distal tip as well as increased light, and the elimination of the hot incandescent bulb. It was originally anticipated that this instrument would allow easy visualization of the duodenum, and in 1961 Hirschowitz reported successful duodenal bulb visualization in 100% of 30 patients.³ Shortly after this report, a wide variety of endoscopists reported that even with a variety of manipulations the duodenum could be seen with the Hirschowitz gastroduodenoscope in less than 50% of cases.^{4,5} In addition, several reports of relatively large series indicated complete failure to visualize the duodenum despite fluoroscopic guidance, repositioning of the patient, increased sedation, external manipulation, cholinergic block, or even general anesthesia.⁶ Despite these early disappointments, work began in the 1960's on special endoscopes designed specifically for duodenal observation.

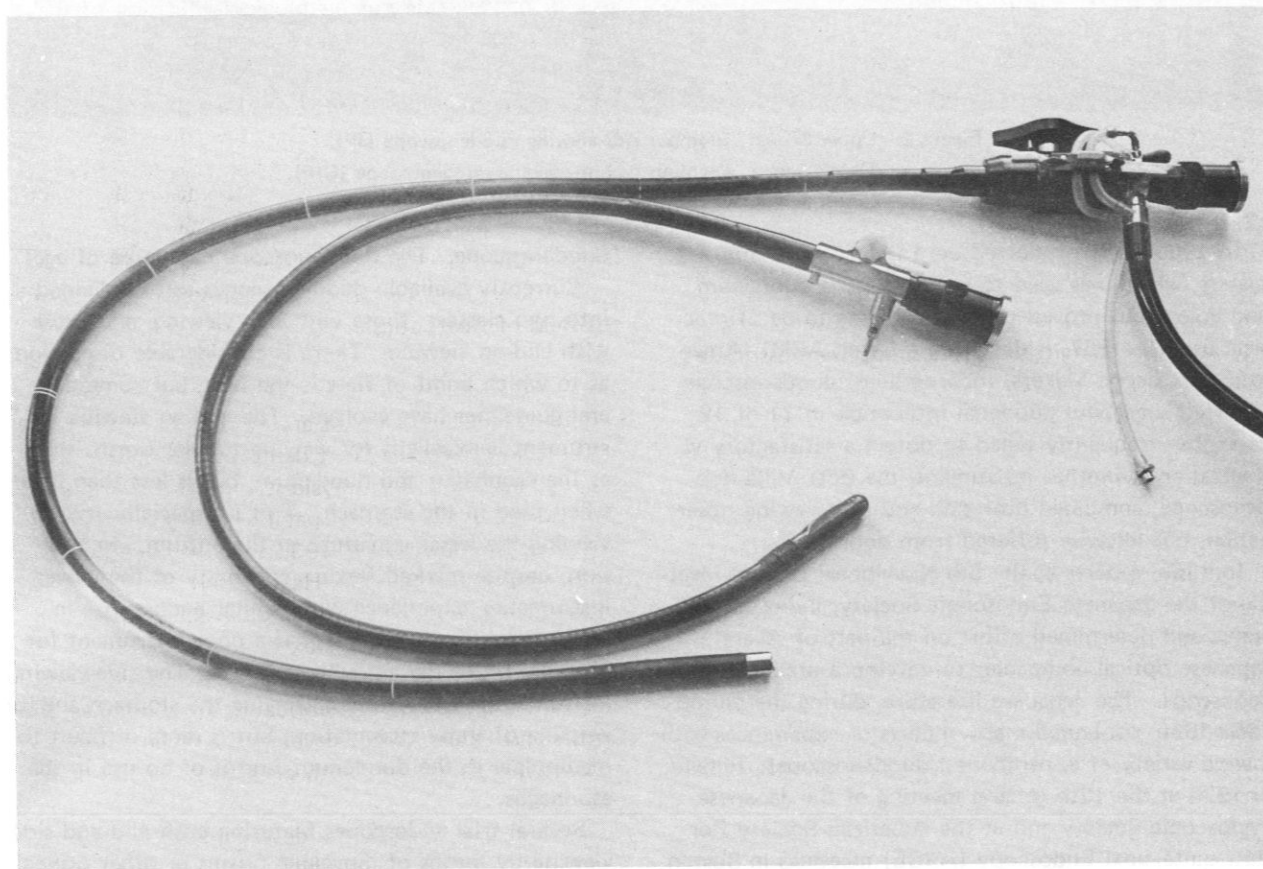


Figure 1: Upper Scope: ACMI Duodenoscope (No. FO-7089J).
Lower Scope: ACMI — Hirschowitz gastroduodenoscope.

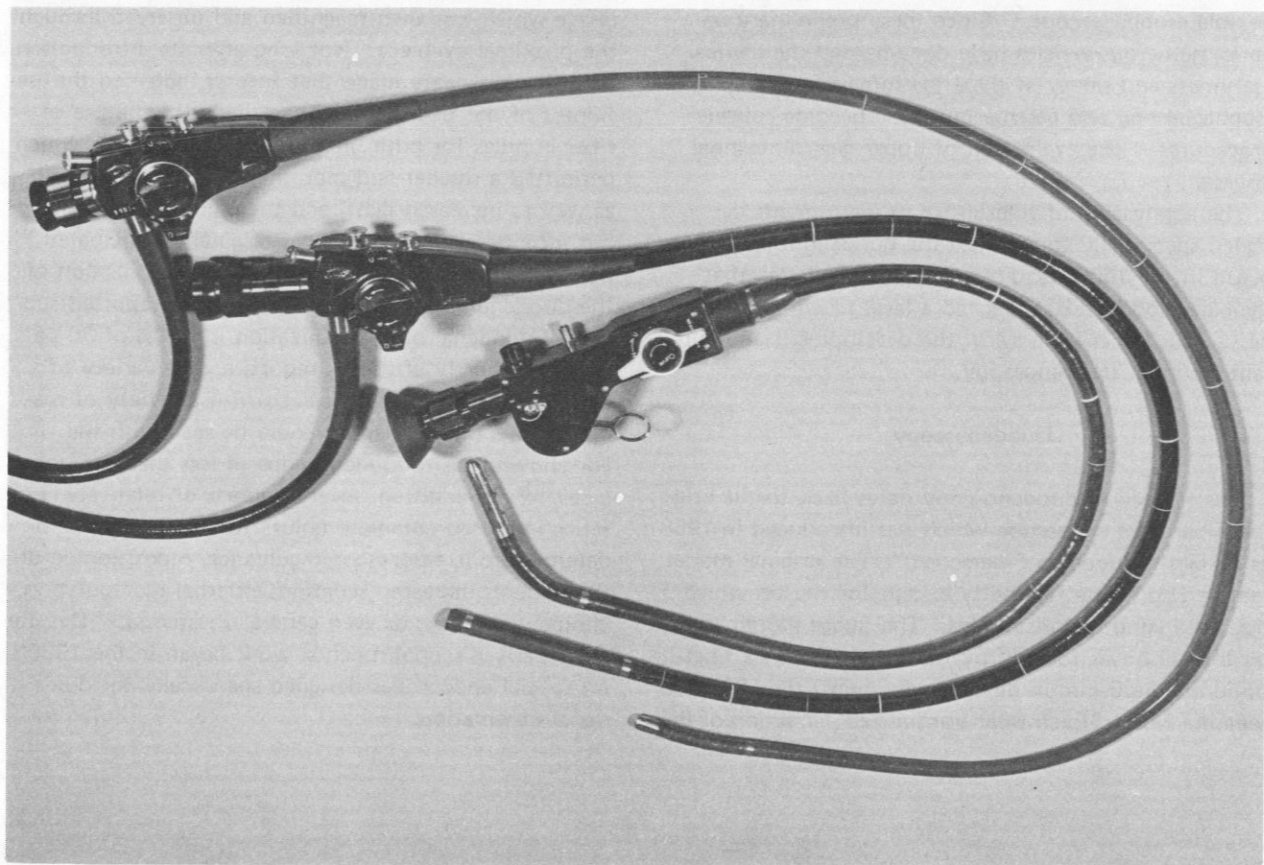


Figure 2: Upper Scope: Olympus side-viewing duodenoscope (JF).
 Middle Scope: Olympus end-on-viewing duodenoscope (GIF).
 Lower Scope: Olympus GTF — a gastroscope.

In 1965 Oshiba reported on a fiberscope 9 mm x 2 meters, which was used to view both the duodenum and colon, but proved too cumbersome to be of practical use. In 1967, Rider using a 6 mm ACMI (American Cystoscope Makers, Incorporated) duodenoscope reported successful duodenal intubation in 11 of 12 cases, but frequently failed to obtain a satisfactory visualization. Another instrument, the Eder Villa duodenoscope, combined both end and side-viewing observation, but likewise suffered from poor optics.

In 1968, reports at the 5th Koshinctsu District Meeting of the Japanese Endoscopic Society, indicated an active and determined effort on the part of several Japanese optical companies to develop a practical duodenoscope. The Japanese literature, during the period 1968-1969, contained many reports of experiences with a wide variety of experimental duodenoscopes. Finally, in 1970 at the 12th general meeting of the Japanese Endoscopic Society and at the American Society For Gastrointestinal Endoscopy (ASGE) meetings in Boston, papers were presented indicating the successful development by several manufacturers of a clinically useful

duodenoscope. The duodenoscope had come of age!

Currently available duodenoscopes can be divided into two classes: those with side viewing, and those with end-on viewing. There is considerable discussion as to which point of view is the best, but some general guidelines have evolved. The end-on viewing instrument is excellent for viewing tubular organs such as the esophagus and duodenum, but is less than ideal when used in the stomach. This is especially true in viewing the lesser curvature of the antrum. In addition, despite marked flexion capability of the newer instruments, experience with similar endoscopes in Japan would indicate that it is a poor instrument for cannulation of the ampulla of Vater. The side-viewing instrument is excellent for viewing the stomach and for ampulla of Vater cannulation, but is more difficult to manipulate in the duodenum, and is of no use in the esophagus.

Several trial endoscopes featuring both end and side viewing by means of moveable prisms or other optical devices were manufactured, but have been found inferior to the single-viewing scope, both optically and

mechanically. One instrument currently being sold is the Eder Villa duodenoscope which employs a moveable tip and both forward and side lenses to provide both end and side viewing. Evaluation of this scope has revealed that it requires considerable optical and mechanical improvement.

Currently available duodenoscopes are manufactured by: American Cystoscope Makers, Incorporated (ACMI); Olympus Corporation, and; Machida Endoscope Company, LTD.

ACMI: ACMI can claim to be the oldest manufacturer of duodenoscopes, as they produced the original Hirschowitz gastroduodenoscope. Their latest duodenoscope (No. FO-7089J) has: a forward-viewing lens system which employs an external light source, push-button control of suction, and air insufflation. The instrument is 105 cm long and 12 mm in diameter. It contains channels for water, suction, biopsy, and air insufflation, and fiberoptic bundles for illumination and viewing. The distal tip flexes 180° and extends 120°. The field of view is 70°. A variety of light sources, as well as cameras for cine and still photography are offered. Because of the forward-viewing lens system this

instrument can be used to examine the esophagus and stomach, as well as the duodenum, but is not suitable for ampulla of Vater cannulation. ACMI offers no side-viewing duodenoscope, but is said to be developing an instrument for ampulla of Vater cannulation. The ACMI duodenoscope is shown in Figure 1.

Olympus: Olympus Corporation offers both side-viewing and end-on viewing duodenoscopes (Figure 2). The side-viewing scope (JF) is 10 mm in diameter and 125 cm long. The field of view is 64° and the tip can be flexed 120° up and down, and 80° right and left. Channels for biopsy, cannula, suction, air and water are provided. This scope provides an excellent view of the stomach and duodenum and can be used to cannulate the ampulla of Vater. Because it is side viewing, it cannot be used to visualize the esophagus.

The end-on viewing scope (GIF) is 13 mm in diameter and 100 cm long. The lens has a 75° field of view and the tip may be flexed 150° up or down, and 100° left or right. There are fiberoptic bundles for illumination and viewing, and channels for water, air, biopsy, and suction. Like the ACMI scope previously described, this scope may be employed for examination of the esophagus, stomach, or duodenum but not for ampulla of Vater cannulation. Both the JF and GIF utilize an external light source and automatic exposure photography with the proper light source (CLX or CLE).

Machida Endoscope Company, LTD: Although Machida has produced a complete line of fiberoptic endoscopes for some time, these have not achieved popularity in this country because of a lack of service facilities. However, it has been recently announced that American Optical Corporation will be the exclusive agent in this country, which may correct this deficiency. The Machida duodenoscope (FDS) is 12 mm in diameter and 152 cm long. The angle of vision is 52° and the tip may be flexed 120° up and down, as well as 60° right or left. There is provision for biopsy, cannula, suction, air and water. Fiber bundles are used to view and illuminate, and photography is nonautomatic. The Machida FDS is a side-viewing instrument with capability and limitation similar to the Olympus JF.

Clinical Status

There are only a few reports on the clinical use of duodenoscopy in the American literature. Oi has reported his experience with the Machida FDS-LB.⁷ In a series of over 400 duodenoscopies, he reported visualizing 120 duodenal ulcers, 12 duodenal diverticula, 14 benign duodenal tumors and 24 lesions associated with cancer of the duodenum, pancreas, or biliary



Figure 3: X-ray study of duodenal ulcer.

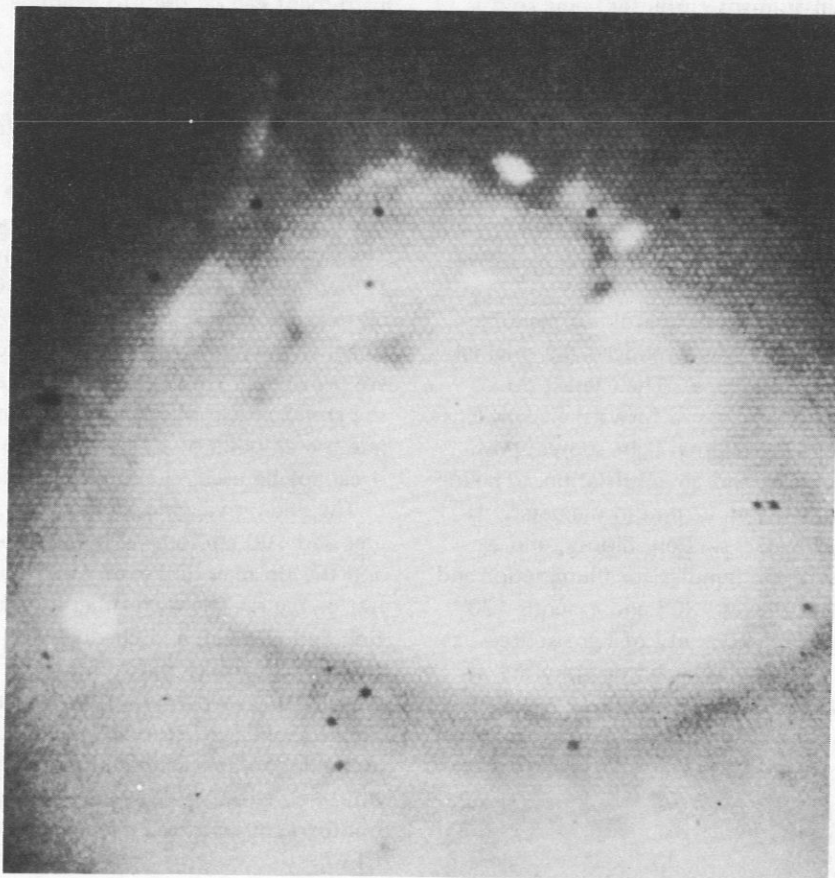


Figure 4: Endoscopic view of duodenal ulcer pictured in Figure 3.

system. In addition, he has presented examples of pancreatograms and cholangiograms done by cannulation of the papilla of Vater. He was able to visualize the ampulla of Vater in 94% of cases, and states that once "an individual endoscopist successfully cannulates one case, he then has little difficulty." These results, as well as further documentation of the clinical usefulness of duodenoscopy, have been confirmed in the Japanese literature by Ogoshi, et al.;⁸ Soma, et al.;⁹ and Shindo, et al.;¹⁰ as well as by several clinical papers presented at the ASGE meetings in May, 1971.

At the Philadelphia Naval Hospital, we have performed duodenoscopy using an end-viewing ACMI FO-7089A, and a side-viewing Olympus JF duodenoscope. Both scopes are easily introduced into the duodenum and in the last 30 patients the duodenum was visualized 100% of the time. Because of length exceeding one meter, both scopes are awkward to use in the esophagus and upper stomach. The side-viewing scope with four-way deflection was more maneuverable and was found superior in viewing the ampulla of Vater and the descending duodenum, while the forward-viewing scope allowed examination of the esophagus,

stomach, and duodenum with one intubation. The ampulla of Vater was easily observed with the side-viewing scope and our two attempts at cannulation to date have demonstrated that this is indeed a technique that "requires some experience." Because of the small size of the duodenoscope biopsy channel, the sample of tissue obtained by biopsy is extremely small. The specimen is so small in fact that it may have little diagnostic import except when malignant cells are noted.

Duodenoscopy has been most useful clinically in the evaluation of upper gastrointestinal bleeding, deformity of the duodenal bulb, and obstructive jaundice. We have observed several duodenal ulcers (Figures 3 & 4), one of which was the site of upper GI bleeding in a patient who presented with melena, and who presented normal findings on upper GI X-ray and esophagogastrosctoscopy studies. In addition, one ampullary carcinoma was seen in a patient who presented with obstructive jaundice. With the ability to cannulate the ampulla of Vater, it is hoped that choledochopancreatography will enable us to better evaluate biliary and pancreatic disease.

There have been no significant complications

reported as yet. Several authors have reported transient elevations of serum amylase determinations after endoscopic pancreatography, apparently related to the volume of contrast medium injected. There has been no clinical evidence of pancreatitis.⁷

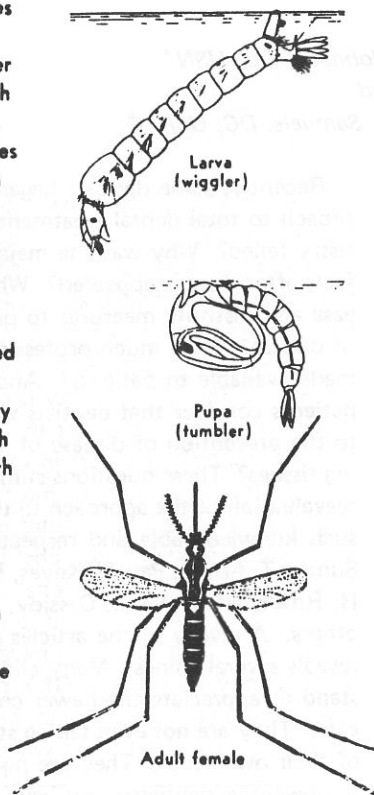
Conclusion

Duodenoscopy and endoscopic choledochopancreatography have been developed to the extent that their rational use may be advocated in the evaluation of selected patients with duodenal, biliary, or pancreatic disease.

REFERENCES

1. Hirschowitz, B., et al.: Demonstration of a New Gastroscope, The "Fiberscope." *Gastroenterology* 35:50-53, 1958.
2. Hirschowitz, B.I.: A Fiberoptic Flexible Esophagoscope. *Lancet* 2:388, 1963.
3. Hirschowitz, B.I.: Endoscopic Examination of the Stomach and Duodenal Cap With the Fiberscope. *Lancet* 1: 1073-1094, 1961.
4. Hirschowitz, B.I.; Balint, J.; and Frelton, W.F.: Gastro-duodenal Endoscopy With the Fiberscope — An Analysis of 500 Cases. *Surg Clin North Am* 42:1081-1090, 1962.
5. Burnett, W.: An Evaluation of the Gastroduodenal Fiberscope. *Gut* 3:361-365, 1962.
6. Cohen, N.N.; Hughes, R.W.H.; and Manfreds, H.E.: Experience With 1000 Fiber Gastroscopic Examinations of the Stomach. *Am J Dig Dis* 11:943-950, 1966.
7. Oi, I.: Fiberduodenoscopy and Endoscopic Pancreato-cholangiography. *Gastrointest Endosc* 2:59-62, 1970.
8. Ogoshi, K., et al.: Endoscopic Observation of the Duodenum and Pancreato-choledochography Using Duodenal Fiberscope Under Direct Vision. *Gastroenterological Endoscopy, (Tokyo)*, 12:83-96, 1970.
9. Soma, S., et al.: Clinical Application of Duodeno-Fiberscope. *Gastroenterological Endoscopy, (Tokyo)*, 12:97-110, 1970.
10. Shindo, S., et al.: Duodenofiberscopy. *Gastroenterological Endoscopy, (Tokyo)*, 12:70-82, 1970. ☛

Some mosquitoes lay their eggs in standing water where they hatch in a day or two. Other mosquitoes lay their eggs in old tires, tin cans, or other water-holding containers in which they may remain unhatched for weeks or months until they are covered with water. With both types of mosquitoes, the wigglers or larvae grow quickly and turn into tumblers or pupae. Soon the skin of the tumbler splits open and out climbs another hungry mosquito.



Avoiding VEE

WASHINGTON (AFPS)—The jet age has made the world smaller and that has become a curse as well as blessing.

Everyone and everything can be transported quickly from place to place, even such unwelcome things as disease. South Texas has been experiencing a terrible epidemic of the disease called VEE.

VEE IS SHORT for Venezuelan Equine Encephomyelitis. The name comes from the fact that it was first discovered in Venezuela among equine-type animals such as horses and donkeys.

The disease is highly fatal for horses, mules and donkeys, but it is much milder in humans. Sometimes opossums, rodents, and possibly even birds, can get it.

THE DISEASE is caused by a virus which is carried from sick animal to healthy animal by mosquitoes. Humans can get it the same way — through the bite of a mosquito which previously fed on an infected animal.

That is the reason mosquito control around the home and yard is important. If there are places where water collects, such as bird baths, old tin cans, tires, fish ponds, flower pots — you might be raising the very mosquito which could bite you and give you VEE.

Defense health authorities have urged service families to inspect their homes for possible breeding grounds on their property and to destroy them. If VEE is in your area, it may be in your community next. Don't give it a place to live!

DENTISTRY BACKWARDS

A RECOMMENDED REVERSAL

By CDR James I. Johnson, DC, USN*

and

CAPT Homer S. Samuels, DC, USN**

Until recently many dentists have practiced dentistry backwards. These dentists have practiced competent restorative dentistry, advised their patients to employ better brushing techniques, promoted application of various fluorides both topically and systemically, and encouraged a limited carbohydrate intake. Although the immediate effect of their efforts appeared to be excellent, the long-term results in too many instances have been disappointing. Patients keep returning with recurrent disease. High-quality restorative treatment has failed. Most patients accept this as "one of the facts of life."

*CDR Johnson is Head, Department of Oral Diagnosis and Restorative Dentistry at Naval Hospital, Philadelphia, Pa.

**Formerly Chief of Dental Service, Naval Hospital Philadelphia, CAPT Samuels is currently Chief, Dental Service at Naval Hospital, Oakland, Calif.

The opinions or assertions contained herein are those of the authors and are not to be construed as official or as reflecting the views of the Navy Dental Corps, the Navy Department or the naval service at large.

Recently, some dentists began to question their approach to total dental treatment. Why had their dentistry failed? Why was the major emphasis AFTER the fact, after disease appeared? Why not prevent the disease and institute measures to prevent the recurrence of disease? How much professional service has been made available to patients? And, most important, did patients consider that dentists were sincerely dedicated to the prevention of disease of the teeth and supporting tissues? These questions stimulated investigation and reevaluation of the approach to therapeutic dentistry by such knowledgeable and respected men as Doctors Sumter T. Arnim, Paul H. Keyes, Robert Barclay, Gordon H. Rovelstad, James E. Cassidy, Francis P. Scola, and others. A review of the articles published by these men reveals several things. Many clinicians do not understand or appreciate the newer concepts of dental disease. They are not even taking steps to prevent disease of their own teeth. They are not genuinely committed to preventive dentistry, but have only been superficially concerned with minimal standards of oral hygiene. Is it any wonder that their patients fail to practice preventive dentistry and suffer recurrence of dental disease?

Objective

Those engaged in the practice of any of the dental specialties are obligated to familiarize themselves with the latest concepts of the cause of dental disease. A brief review of these concepts and a national basis for a developing program in preventive dentistry will be presented. A systematic outline of the doctor-to-patient conference, ways for relating this information to the patient, prevention techniques, and finally, motivation and its relationship to the preventive dentistry program will be discussed.

Pathology

Efforts made by dentists to understand the cause and development of dental disease form the basis for successful application of preventive measures.

One of the best articles reviewing the subject of dental caries by Dr. Paul H. Keyes is entitled "Research in Dental Caries."¹ In this article Dr. Keyes describes three different patterns of cavitation. One is called smooth or multisurface, and it is produced by several strains of streptococcus which have the ability to form bacterial plaque on the teeth. These organisms act on carbohydrates and transform sucrose into a sticky substance called dextran. Dextran is the material which the bacteria use to attach themselves to the teeth, forming the group, colony, or plaque of cells. If not disturbed these streptococci, and other organisms that invade the plaque, ferment soluble substrates; an acid pH and caries on the tooth surface result.²

A second type of caries, pit and fissure decay, is produced primarily on chewing surfaces of the teeth. It is associated with various acid-producing bacteria that

become lodged in the pits and fissures. These organisms need not form a bacterial plaque to produce destruction of the tooth surface.³

A third type of caries is found on the root surface. The organisms that produce root caries evidently form a bacterial plaque similar to the plaque formed by streptococci. These filamentous, motile organisms require sucrose in order to synthesize dextran and another polysaccharide called levan. This specific plaque, which may well resemble the plaque of periodontal disease, will not cause caries of the enamel even when it is placed on enamel.

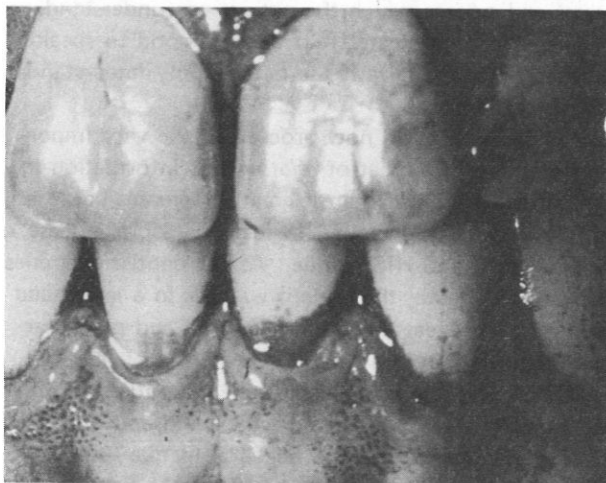
Periodontal disease has long been associated with bacterial plaque that is firmly attached to the teeth, and primarily motile organisms (spirochetes, motile rods, diphtheroids and filamentous microorganisms).

If the clinician fully considers these disease processes, three of which are related to plaque formation (smooth surface caries, root surface caries and periodontal disease), and one which is not (pit and fissure caries), he will be in a better position to practice and teach specific preventive techniques.

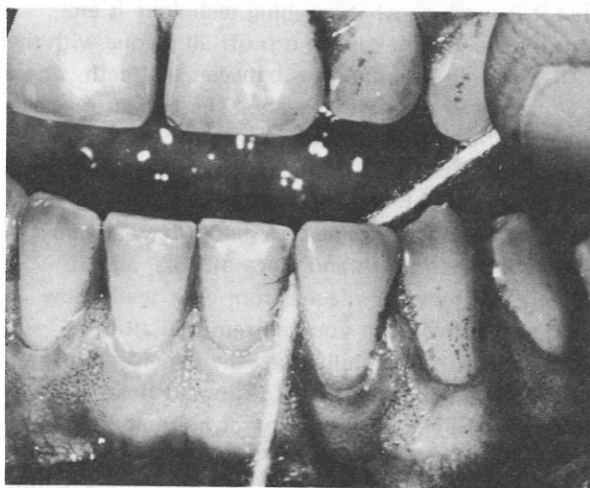
Chairside Conference

Since bacterial plaque formation on the teeth is a continuing daily occurrence, the need for patient cooperation in prevention is paramount. To secure patient involvement, we must provide: (1) information, (2) direction of information to the patient, (3) materials and techniques for application, and finally, (4) motivation toward the goal — PREVENTION.

One of the most effective ways to inform the patient is by reserving 15-20 minutes at the first appointment for talking directly with him, "One-on-One."



Daily use of a disclosing solution eliminates guesswork in visualizing plaque on teeth.

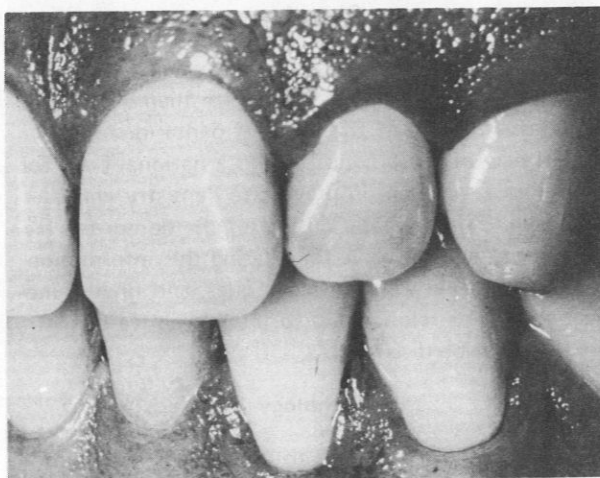


Three-ply nylon yarn is extremely effective for removing bacterial plaque between teeth.

This important conference is not to be relegated to the dental assistant, hygienist, pre-recorded slide or tape program, but to the dentist, "One-on-One." This will serve several purposes. Rapport will be established with the patient. The patient will perceive that the doctor, not only the assistant, is really interested in his oral health and in preventing damage to his teeth. The doctor will be clearly establishing the philosophy of good dental practice.

During this information period the following points should be established for the patient:

1. Enough information and satisfactory techniques are available right now to prevent the loss of any more teeth.
2. The patient must realize that he, the patient, plays the principal role in preventing recurrence of disease in his teeth — the dentist is only secondarily involved.
3. Dental caries and periodontal disease are caused by specific bacteria.
4. Because these bacteria are always present in his mouth, uncontrolled, dental disease will tend to recur. A vicious cycle exists that only the patient can interrupt.
5. The bacteria cause dental disease only when they become attached to the teeth (plaque formation).
6. To prevent recurrence of disease the bacteria must be kept off the teeth. Mouthwash will not accomplish this.
7. The only available means of removing these bacterial colonies or plaque from the teeth is by mechanically rubbing them off.
8. Most individuals use a toothbrush to rub off bacterial plaque, but a toothbrush is not enough. It does not matter what kind of a brush is used, how often it is used, or what brushing technique is employed. The patient cannot rub off all plaque with the brush. He will miss the areas between the teeth, where 85% of recurrent disease appears. The patient must use dental floss, tape or yarn to rub out the plaque from between the teeth. This complete plaque removal must be accomplished once in 24 hours.
9. The patient should be asked, "If you were given a new toothbrush and piece of floss, and attempted to remove all plaque from your teeth, how would you know when you had removed all the plaque?" How successfully does the patient remove plaque with regular use of the brush and floss? Every patient says he has no idea whether he removed some, one-half or all of the plaque. The patient is guessing; he has been guessing all his life until he eventually loses his teeth! The importance of a disclosing solution must be emphasized to the patient. If the bacterial



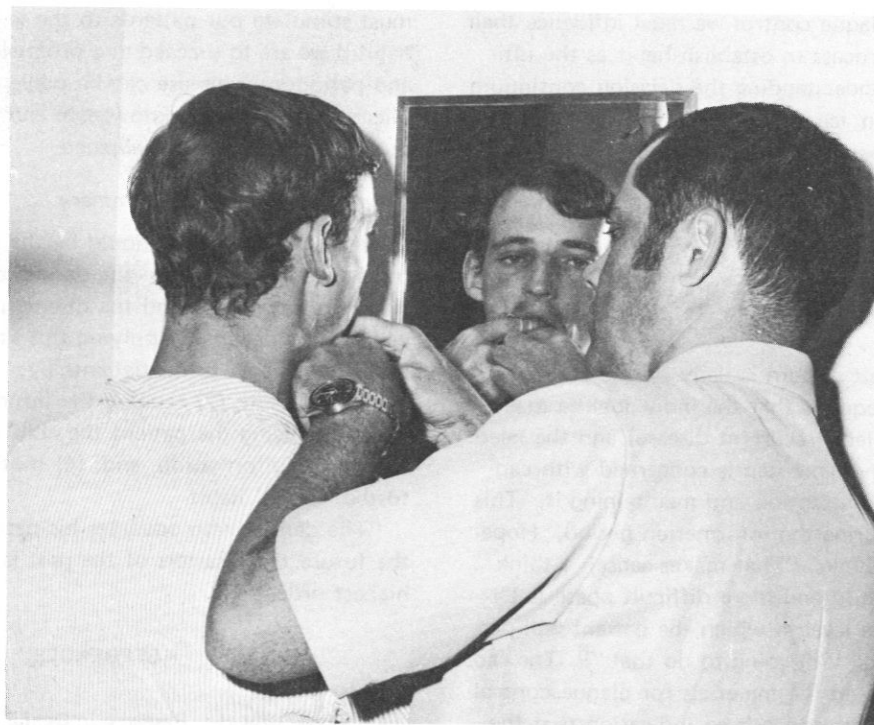
All bacterial plaque must be removed from all tooth surfaces, once in 24 hours.

plaque is then stained before application of the brush and floss, the opportunity to know is substituted for guessing for the first time in his life. He can see what is to be removed and evaluate his own effectiveness. The importance of daily plaque control must be emphasized; once each day is required for the rest of his life. The disclosing solution should be used every day for at least two weeks while the patient is learning to locate the bacterial plaque on his teeth, until he is consistently effective at removing all bacterial plaque. Then the solution is used as a check once each 7 – 10 days.

During the information period of the appointed time, the patient has been seated in the dental chair, the room is quiet, and most important, the information has been presented in an organized manner in terms or language which the patient can understand. (We must communicate!!) It does no good to speak of bacteria and gingiva if the patient only understands germs and gums.

The dentist should now proceed to the very important second phase, that of *relating* this information to the patient. Patient interest greatly increases because we are now talking about HIS teeth, HIS oral disease, HIS bacteria, and HIS plaque. As the dentist examines the patient's teeth, the patient watches in a large hand-held mirror. Areas of decay, gingivitis, and plaque accumulation are pointed out.

Next, using a disclosing solution, the patient's teeth are stained. Again we examine the teeth and the patient is now looking at HIS bacterial plaque — not a picture or slide — but his own plaque! If gingivitis or periodontal disease is present, a portion of the plaque is removed while the patient is watching and placed



Patient receives personalized instruction in the proper use of dental floss.



The Phase Microscope is a most effective instrument utilized to enlighten and motivate the patient.

under the phase microscope. The phase microscope is one of the most effective means of relating information to the patient. These are *the patient's* bacteria swimming under the microscope!

In review, there are various methods of relating our information to the patient: (1) The patient looks at his own mouth; (2) The patient's bacterial plaque is viewed by staining; (3) The patient examines his bacteria under the phase microscope; (4) Lactobacillus counts and Snyder test can also be useful.

We are now ready to instruct the patient in daily plaque control. He is shown how to use floss and tries it himself. He is given a sheet of instructions for plaque removal and a list of materials to purchase: brush, disclosing solution, tape, floss, or yarn. The patient will then be expected to stain, floss, and brush using the techniques he finds most effective in his hands; he should then restain as a final check; he is also provided with several disposable intra-oral mirrors. At a second appointment the teeth are restained, flossing technique is checked, and prevention is reemphasized by a highly motivated dental technician or assistant.

Patient Motivation

Have we succeeded in motivating the patient? What about motivation? If we are to stimulate our patients

to practice daily plaque control we must influence their decision-making process to establish habit as the ultimate result. By understanding the decision continuum technique,⁵ we can accurately plot the patient's progress along the five-step process leading to habit formation. The five steps or levels are:

1. AWARENESS
2. INTEREST
3. INVOLVEMENT
4. ACTION
5. HABIT

The desired habit pattern is daily plaque control.

The first step requires that the individual be made aware of the problem (recurrent disease) and the need for correction. The next step is concerned with capturing the patient's attention and maintaining it. This is accomplished during the information period. Hopefully the patient thinks, "That makes sense. I think I'll try it." The third and more difficult phase is INVOLVEMENT, the level at which the patient will participate. He thinks "I'm going to do that."⁶ The fact that he has purchased the materials for plaque control and used them at least once is an indication that the patient has reached this level. When the individual is performing, more than one time, the action level has been attained. The habit level, daily plaque control, is reached when motivation is strong enough and continuous.

So-called mass patient education techniques such as movies, slides, and television, only prod the patient towards the second level of motivation, at best. Patients have been aware of dental disease and a fair number have become interested in the problem. But we

must stimulate our patients to the levels of action and habit if we are to succeed as a profession. Dental caries and periodontal disease can be prevented if sound application of scientific knowledge and the techniques of preventive dentistry are pursued.

Summary

Preventive dentistry should be the primary concern of every dentist. Before the dentist can teach prevention he must understand the disease processes with which he is dealing. Applying this knowledge he can teach prevention to his patients by: (1) informing and educating them; (2) relating the information to the patient; (3) giving the patient the ability and techniques to use this information, and; (4) motivating the patient to the level of habit.

"The dentist who educates his patients to prevent in the future the disasters of the past is a clinician of the highest order."⁶

REFERENCES

1. Keyes, Paul H.: Research in Dental Caries. J Am Dent Assoc 76:1357-1373, June 1968.
2. Ibid, pp. 1360-1361.
3. Ibid, pp. 1358-1359.
4. Ibid, pp. 1359-1360.
5. Cassidy, James E. and Cassidy, R.J.: Patient and Doctor Motivation in Preventive Dentistry. Presented in Preventive Dentistry Seminar, Bethesda, Md., March 1970.
6. Harding, J.C. Almy: Nutrition Therapy by Dentists: Dangers, Advantages, Technique. J Prosthet Dent 3:682-688, September 1953. ☞

"I wish peace from the bottom of my soul, but desire to see us prepared for war, in every respect."

—Thomas Truxtun ☞

"Every danger of a military character to which the United States is exposed can be met best outside her own territory — at sea."

—Alfred T. Mahan ☞

Regional Infant Cardiac Program

*By LCDR Norma R. Coyle, NC, USNR, Educational Coordinator,
Naval Hospital Chelsea, Boston, Massachusetts.*

Introduction

Are you aware that something very special is being done today for the cardiac infant? Six states in the New England area (Connecticut, New Hampshire, Rhode Island, Massachusetts, Vermont, and Maine) are participating in a Regional Infant Cardiac Program (RICP). This is the *first* regional infant cardiac program in the United States. The design, findings and results of this collaborative effort will most likely lead to expansion and the development of more centers.

History

It has been estimated that approximately 400 infants were dying of congenital heart disease annually because early detection, diagnosis, and surgery were lacking. Today, at least 50% of these babies can be saved. Their physical defects represent correctable anomalies as distinguished from disease processes. The RICP was instituted in June of 1969. Nursing and medical personnel have become increasingly more aware of the fact that these babies can be saved. Education, communication,

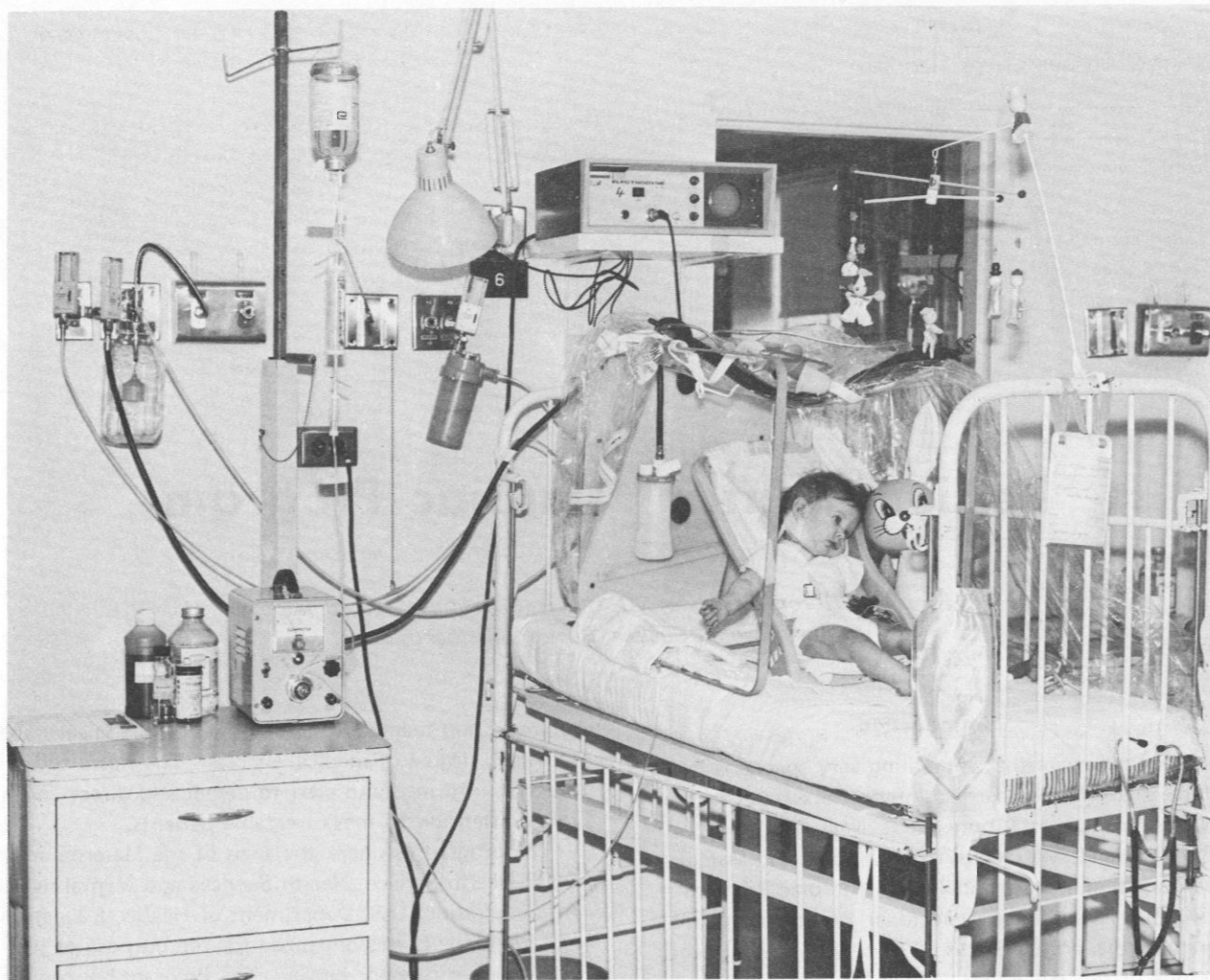
referrals, and teamwork have contributed immeasurably to a high degree of medical success. The nurse today must be informed and alert to detect and direct appropriate attention to these treatable patients.

The program is under the aegis of the Maternal and Child Health Service, Health Services and Mental Health Administration, U.S. Department of Health, Education, and Welfare. It was organized for the purpose of providing better care for babies. The Program has funds for transportation of eligible newborns from outlying hospitals or areas to one of the 11 participating cardiac centers. It has a 24-hour telephone consultation service, seven days a week, that facilitates communication between newborn nurseries and the infant cardiac centers. "A center is only as far away as your phone if you know about the service," Mrs. Serreze commented. She indicated that the program is also collecting considerable data from which a profile of the patient population can be constructed.

The Nurse's Role

Emphasizing the importance of early detection, Mrs. Serreze remarked that a diagnosis of heart disease in the newborn is not necessarily easy to establish. Persistent cyanosis or increased respiratory rate with or without cyanosis suggests the possibility of heart disease. The auscultatory observations, electrocardiographic findings, and appearance of the heart in X-ray studies may provide the necessary confirmation. A sick baby with heart disease may present respiratory

Acknowledgement: The author wishes to acknowledge the source of information for this article as Mrs. Judith Serreze, R.N., Nurse Coordinator for the New England Regional Infant Cardiac Program. Mrs. Serreze addressed the Nurse Corps officers and hospital corpsmen at a Continuing Education Program meeting on 1 June 1971 at the Naval Hospital Chelsea, Boston, Mass.



Typical unit at an Infant Cardiac Center, Children's Hospital Medical Center, Boston, Mass.

symptoms alone without any other demonstrable findings. It is usually the nurse who sees the baby first. She should be able to detect acute symptoms and signs of heart disease and inform the physician immediately. Prompt referral to a cardiac center should be facilitated.

Referral to a cardiac center for heart catheterization and surgical treatment can lead to a significant salvage rate for these critical cases. Statistics show that 60% of the critically-ill infant cardiacs encountered during the first year of the Regional Infant Cardiac Program were alive one year later. A few years ago, some of these developmental abnormalities were associated with an almost 100% mortality rate.

Nursing Observation Record

At the Infant Cardiac Centers, nurses receive training in diagnostic features, signs and symptoms to be

observed, nursing care, reporting, recording, and referral procedures. Figure I represents the nursing observation record which is employed. It is highly desirable to obtain the infant information and utilize the form from the very beginning. The form provides helpful and immediate transfer of written information that can be readily forwarded to the infant cardiac center. It is further recommended that such a form be utilized in the care of all newborns.

Signs/Symptoms

Nursing personnel should be familiar with the signs and symptoms of heart disease in the neonate. Figure II lists the observable alterations in bodily functions of the newborn which indicate the presence of disease and can be regarded as valuable aids in establishing the diagnosis. *Early detection is THE KEY* to optimum benefits of medical care.

FIGURE I.

NURSING OBSERVATION RECORD

Baby _____ Sex _____ Birth Date _____ Time _____
 Unit No. _____ Birth Weight _____
 Clinical Diagnosis _____

Record all observations every ½ hour immediately after delivery and then gradually decrease to once/shift. Record anything unusual whenever it is noted. Times MUST be accurate.

Color									
Grunting									
Flaring									
Chest Retraction									
Resp. Rate									
Heart Rate									
Liters Oxygen									
% Oxygen									
Jitteriness & Activity									
Date									
Time									

Surgery

The American Heart Association has prepared the following checklist of items to be discussed with the family by the physician when cardiac surgery is indicated. The nurse should be present during the interview.

1. The nature of the defect.
2. The plan for surgical treatment of the defect.
3. The risks involved.
4. Whether a complete or partial correction is expected.
5. Whether blood transfusions will be required and what must be done about obtaining blood donations.
6. What the parent and the child can expect following the operation: pain and the other postoperative reactions, the use of apparatus and other devices such as oxygen tent, chest drainage, and intravenous feeding.
7. The need for a special nurse after the operation, and the approximate number of days.
8. Visiting hours.
9. Approximately how long the patient will have to remain in the hospital, and how long the child should be prepared for going to the hospital.
10. Expenses for the infant; available funds vary from State to State. Social workers can help find available financial resources. Private insurance, Medicaid, Crippled Children's Service, the RICP, and the family often help cover the costs of care.

Summary

Information concerning the specific location of the 11 participating cardiac centers may be obtained by writing

FIGURE II. SIGNS AND SYMPTOMS OF CONGENITAL HEART DISEASE IN INFANTS

Tachypnea	Recurrent Respiratory Infections
Cyanosis	Failure To Gain Weight
Dyspnea	Heart Murmurs
Choking Spells/Stridor	Weak Cry
Pulse Rate Over 200/Minute	Expiratory Grunting
Anoxic Attacks	Enlarged Heart
Lethargy	Tachycardia
Nasal Flaring	Enlarged Liver
Chest Retractions	Polycythemia
Ready Tiring	Cerebral Vascular Accident
Reluctance To Feed	Pallor — Anemia
Sweating	Pitting Edema

to: Regional Infant Cardiac Program (RICP)
 Administrative Offices
 300 Longwood Avenue
 Boston, Massachusetts 02115.

The program provides 24-hour telephone consultation service between newborn nurseries and the infant cardiac centers. All telephone calls are expedited as emergency priority calls. The centers are specially staffed and equipped. The RICP has funds available to provide transportation costs for eligible newborns from outlying hospitals to one of the participating centers. "Through any one of us who knows about this very special service for infants a life could be saved," Mrs. Serreze pointed out, "and we could be the instrument through which this vital mission might be accomplished."

RECOMMENDED READING

- Altshuler, A. Complete Transposition of Great Arteries. *Am J Nurs* 71:96-98, January 1971.
- American Heart Association. If Your Child has a Congenital Heart Defect, 1970.
- Bartach, V. Instruction Program for Parents of Infants with Cardiac Defects. *Hosp Top* 45:67-72, May 1967.
- Betson, C., et al. Cardiac Surgery in Neonates — A Chance for Life. *Am J Nurs* 69:69-73, January 1969.
- Fyler, D.C. Diagnosis and Treatment: The Salvage of Critically Ill Newborn Infants with Congenital Heart Defects. *Pediatrics* 42:198, July 1968.
- Fyler, D.C.; Nadas, A.; and Bernhard, W. Operable Heart Disease in the Newborn Period. *Postgrad Med* 46:80, 1969.
- Gillon, J. Continuity of Nursing Care of Cardiac Infants. *Nurs Clin North Am* 4:1, March 1969.
- Pidgeon, V. The Infant with Congenital Heart Disease. *Am J Nurs* 67:290-293, February 1967.
- Rowe, R.D. and Mehrizi A. The Neonate with Congenital Heart Disease. W.B. Saunders Co., Philadelphia, 1969. 📖



Dear Doctor Egnatinsky:

I am most concerned about your recent letter to the Editor of U.S. NAVY MEDICINE. I find it most unfortunate that you did not convey to me some of your feelings prior to your departure from the Navy. It is only by free communication between a commanding officer and his staff that a command can become aware of problems subject perhaps to local corrective action. Certainly your feelings were worthy of discussion.

As far as I am concerned your letter is in need of further definition. I am certain that many of your readers may feel the same way. Specifically, what "authoritative and administrative obstacles to the conscientious practice of medicine" did you run into? How many of these obstacles may be dictated by the requirements of the JCAH? How many are found in a civilian hospital? What is the difference between "renovation of the physical plant" and "modernization of patient care facilities?" Were "administrative reports and conferences" scheduled well in advance? I will agree with you that conferences should not be scheduled during clinic hours, but how did administrative reports and conferences interfere with your patient care and the completion of your O.R. schedule? Were you ever forced to leave a patient in the O.R. because of them? What are the traditions of the military service that conflict with your upholding "the highest standards and traditions (sic) of the medical profession?" Finally, what advances in medical care are taking place in the civilian communities that are not taking place in the Navy without great administrative delay?

I cannot answer for what transpired at this particular hospital before my recent arrival. Perhaps you did have justifiable cause for complaint. What upsets me more about your letter than anything else is your tendency to argue from the specific to the general. It does not follow that your cause for complaint at this hospital necessarily applies to all naval hospitals, particularly when that complaint may have been subject

to local corrective action. I am sure you will find deplorable conditions in some civilian hospitals but that doesn't mean we should condemn the entire civilian medical community because of them.

I sincerely hope you will find civilian practice more rewarding than your years in the Navy. From one who has savored both as a practicing clinician, I can honestly say that whereas the monetary reward was greater as a civilian, the freedom from administrative work both as it related to the office and hospital was greater in the Navy. I would welcome your views on the subject five years hence.

I do not deny our problems. I recognize them. And I also recognize that we need good men who are willing to try to resolve them. And that is why Navy Medicine continues to be a worthwhile challenge.

CAPT F.W. Burke, MC, USN
Commanding Officer
Naval Hospital, Annapolis, Md.

To the Editor: I would like to take this opportunity to reply to the letter of LCDR Jack Egnatinsky, MC, USN, published in the August 1971 edition of U.S. NAVY MEDICINE. I believe that LCDR Egnatinsky's dissatisfaction with Navy medicine arises as a result of confusion in priorities. He should remember that he is first and foremost a naval officer and secondly a physician. As a naval officer, he joins thousands of other highly skilled, dedicated officers serving in their respective specialties in the modern day Navy. As a physician he should never make the assumption that his particular area of specialization should demand or command any higher prerogative or priority than is afforded any other area of specialization. A mature perusal of his role would indicate to him that as a navy physician he should be able to possess the best of two possible worlds.

In answer to his criticism that the Navy Medical Corps is not interested first and foremost in patient

care, I can only believe that Dr. Egnatinsky must be sadly out of the current trend of recent thinking. The Bureau of Medicine and Surgery by direction, by guidance and by avowed policy is doing its utmost to place the U.S. Navy Medical Corps physician in the forefront of patient care and medical research.

With respect to his criticism of the necessity of participation in administrative functions, I believe that it is to the everlasting credit of the U.S. Navy Medical Corps that it allows its junior officers to participate, in an early stage of their training and career, in the formulation of the administrative policies within which they must work. I am sure that it will be many years before Dr. Egnatinsky, functioning in the civilian community, will be able to assume as strong a role in the administration and formulation of the type of medicine which he will practice.

Speaking as one of his dedicated colleagues who is staying, I find it possible to provide the military community with the best advances available in medical care.

CDR William M. McDermott, Jr., MC, USN
Naval Hospital, Portsmouth, Va.

To the Editor: I have just finished reading the August edition of U.S. NAVY MEDICINE and a double check of the photographs shows a distinct lack of bearded, mustached, long-haired males. As a point of curiosity — does this indicate conscious censorship on your part or does it reflect a reversal of the Navy trend toward hirsute adornment?

P.R. Morris
Major, USMC
MCB, Twentynine Palms, Calif.

Major Morris' observation checks out. There is no conscious censorship on the part of U.S. NAVY MEDICINE, but we have no way of exploring the possibility of conscious censorship at the field-level source of photographs. Many of us may censor at a subconscious level. We strive to remain objective. More than likely, the trend toward hirsute adornment will follow the usual course of fashion generally. Attention is invited to page 34.

To the Editor: Thank you for dedicating your issue of June 1971 to the Navy Hospital Corpsmen. The editorials and memorials honoring Hospital Corpsmen of "the past, present, and future," were very much appreciated by myself and I'm sure other corpsmen that read them.

I personally feel you did the Hospital Corps a gross injustice by backing up your articles with the outdated photographs that were used. Your front cover photograph of a First Class Corpsman in Vietnam was a poor representation of the Corps, but somehow you stated it "represents the Naval Hospital Corps rather well." I'm sure this gentleman staged the photograph to impress someone at home.

Since a major portion of the Hospital Corpsmen are back from Vietnam, I don't think it would have been too difficult a task for your staff to get up-to-date pictures of corpsmen at their present duties. If your pictures had to have a Vietnam-oriented background, I would imagine there is an unlimited supply of volunteers that would gladly donate their mementoes since the Navy has sent thousands of doctors, Medical and Nurse Corps personnel, Hospitalmen and Dentalmen over there.

The articles and papers published in your magazine, relative to the various aspects of medicine and dentistry are quite beneficial to myself and other corpsmen, among other people, and I thank you.

I sincerely hope my suggestions are beneficial in the coordination and preparation of future articles concerning corpsmen.

Thank you for your time and effort.

HM2 Rodger L. Dowd, USN
First Medical Battalion
1st MAR DIV (Rein), FMF
Camp Pendleton, Calif.

As HM2 Dowd points out, the June issue honored NAVY HOSPITAL CORPSMEN of "the past, present and future." Present and recent-past photographs were hard to come by. In response to our hurried request, an intermediary provided the picture we used for the cover. Insofar as the First Class Corpsman is clean, neat, well-groomed, attractive, wearing an amiable smile, and standing before an impressive banana tree (terrain admittedly unfamiliar to I Corps but not unusual for Amphibious Task Force 211, Naval Advisory Group), one might say the scene was staged. He is pictured in a refugee camp where he labored so long and well. The photo was not taken by an official photographer for a Public Relations or press release effort. The Corpsman pictured on our cover willingly assumed his assigned duties in Vietnam where he served with distinction, having been awarded the Bronze Star, the Purple Heart, and a PUC. We submit that our original statement was reasonably accurate. Such a man "represents the Navy Hospital Corps rather well."

HM2 Dowd has a valid point in suggesting that

many of our readers could provide interesting pics and mementoes. They seldom do. Perhaps some are restrained by a fear of peer criticism that their photographs were staged "to impress someone at home."

U.S. NAVY MEDICINE thanks HM2 Dowd for his letter, and hereby extends an open invitation to all Navy Medical Department personnel to donate their snapshots and mementoes. You send'em, we'll print'em! 🍪

Hair Today . . . Gone Tomorrow?

WASHINGTON (AFPS)—It's still butch wax and a stiff brush versus hair-spray and a teasing comb in many hairy barracks duels these days, despite the new liberal haircut policies of most services.

Young hair enthusiasts often counter criticism with a display of historical paintings showing hard-fighting, pony-tailed Revolutionary War soldiers behind a long-tressed general on a white horse.

The critics may quibble that those long-haired soldiers were only wearing wigs. But for the most part they'd be wrong. They looked like wigs with all that white powder on them, but for the man in the ranks in those days it was probably his own hair . . . smothered in grease and flour.

By 1799 it had become such a problem with the Army sense of neatness that Major General Alexander Hamilton set down standards for uniform and appearance that were designed to clean up the hair and shorten the pony tail.

Two Years later Brigadier General James Wilkinson called for short hair and ruled that no whiskers were to grow below the bottom of the ear. It was resisted but the ranks conformed.

"Neatly Trimmed" beards made a comeback in 1853, but the military eventually arrived at white sidewalls after some trench troubles with lice and the like during World War I.

The loss of long greasy locks caused a mild stir among the duck-tailed crowd of the Korean War era, but regulations allowed a mini-tail and fancy pompadour. Most service policies seemed more concerned with skin showing around the ear, tapered neck and sideburn length than with the hairdo's height (assuming one could still wear headgear properly).

Ivy leaguers fit nicely into the military mold and it wasn't until the age of Aquarius that the military returned to splitting hairs.

Today, most of the hairy problems are solved with a little compromise from both sides. Only the Marine Corps holds tight to the short hair. But even a few Marines have gone mod in off-duty civvies topped with a shaggy rug. There are wigs in all colors and styles these days for every head and some of the other bodys parts as well. A naked chest can even be remedied.

A reverse problem arose before the new regulations were applied to the reserve and national guard troops. Some of the long hairs there bought short-haired wigs to hide under during their weekend duty tours.

It may be another generation before the controversy subsides. Then, perhaps the taste will be reversed and the young long hairs of today will be fighting with the peeled pates of new society that finds them "old fashioned establishment ragheads!"





WAGE-PRICE FREEZE: DOD YIELDS NEARLY \$1 BILLION

Military and civilian personnel of the Department of Defense, affected by President Richard Nixon's Aug. 15 Executive Order providing for the stabilization of prices, rents, wages and salaries, will, according to Jerry Friedheim, Principal Deputy Assistant Secretary of Defense (Public Affairs), contribute more to the program than any other single organization, in or outside of the Government. All in all, according to Mr. Friedheim's estimate, DoD personnel will be yielding between \$900 million and \$1 billion under the program.

Mr. Friedheim discussed the wage-price freeze and Defense policies concerning the wage-price freeze with Pentagon newsmen Aug. 20, the day following a formal statement by Deputy Defense Secretary David Packard.

Mr. Friedheim told the newsmen that the Defense Department was in the process of implementing guidelines established by the Government's Cost of Living Council.

Mr. Friedheim remarked on longevity increases for military personnel, payment for which would be, he stated, deferred during the 90-day wage-price freeze, and, following that, would not be made retroactive.

He said there were several important exceptions: prisoners of war and servicemen missing in action (PW/MIAs) would be granted longevity increases, as well as enlisted men attaining the first-step pay increase after four months in the Service.

He also noted that persons who earned a longevity step during the freeze and then retired would receive retirement pay calculated on the higher amount. The same formula would also be used for death gratuities,

he added. He explained further, reenlistment bonuses would be paid under criteria that existed prior to Aug. 14. Servicemen will continue to draw whatever longevity pay they received prior to Aug. 14, he said. *(A later report cited Sept. 1 as the cutoff date.)*

Mr. Friedheim explained that a six per cent cost-of-living pay raise, originally slated for Jan. 1, 1972, but now deferred, would have an impact of \$800 million on the pay of civilian and military personnel. Deferred longevity payment for military personnel during the 90-day freeze period would amount to a loss to such servicemen of an additional \$10 million, and similar in-step, within-grade increases deferred for DoD civil servants during that time would be, likewise, \$10 million. Wage Board increases, also postponed for 90 days, were estimated at \$75 million, he said. The freeze would have no effect on promotions, it was brought out.

He emphasized that DoD intends to make no increases in pay scales or make any other Military Department action which would not be in full accord with President Nixon's wage-price freeze. He added that DoD would abide by the legal determinations of the Cost of Living Council.

Later in the discussion, Mr. Friedheim said that additional proficiency category pay would not go into effect during the freeze, but persons already receiving "pro" pay, combat pay, sea pay and the like, would continue to receive such pay unless it was withdrawn by Service regulations—not freeze-connected—on an individual basis.—Washington, D.C. (AFPS). 🇺🇸

FACTS ABOUT MARIJUANA

In the past few years, the smoking of marijuana and the use of stronger forms of cannabis have increased to the point that it is now a major problem in the United States. The reasons for this are complex and solutions equally complex. Yet, some aspects of the problem are clear and they should be made part of the record. In regard to the use of marijuana and hashish, there appears to be no reason for their use in our society other than pleasure seeking. Presently identified physical and psychological effects indicate actual and potential harm to some users.

Here are some facts about marijuana as collected by the Bureau of Narcotics and Dangerous Drugs:

(1) Usage and arrests for marijuana possession and sale are increasing.

(2) Possession and sale are prohibited by law in most nations of the world; 70 countries have agreed to control the drug under a United Nations treaty.

(3) Heavy marijuana use is seldom isolated from the abuse of other drugs such as LSD, amphetamines, and barbiturates.

(4) Scientific studies have revealed tetrahydrocannabinols (THC's) as the psychoactive ingredient in marijuana.

(5) THC's are powerful, mind-altering drugs like LSD.

(6) Frequent heavy use of more concentrated forms of cannabis such as hashish has been associated with physical, mental, and social deterioration.

Marijuana's Effects

Marijuana and all the known products extracted from the plant material have mixed depressant, sedative, and hallucinogenic properties. Marijuana acts principally on the brain. In low doses, it can produce hallucinations, and in higher doses, it can result in bizarre behavior and a psychotic state.

The effects of marijuana on an individual are dependent upon numerous physical and psychological factors. One such factor is the dosage of the drug, measured by the potency of the preparation. Other factors involved in variation of effects are the expectations of the user, prior experience with drugs, and the setting, both physical and social. It appears that a person must "learn" to experience some of the effects of marijuana. On the other hand, it may be that neuro-physiological changes which accompany sustained use may influence the effects. Both factors may be true. Because of the great inter- and intra-individual variation in responses to



marijuana, there is much confusion and disagreement about effects.

Some frequently reported short-lasting physical effects of marijuana (low dosage) are:

(1) Dilation of the blood vessels in the eye which causes a "bloodshot" appearance, increase in heart rate, irritation of the throat, and dryness of the mouth.

(2) Appetite for food is often increased, and some marijuana users become drowsy.

(3) Although these changes may occur, all of them are not necessarily found in every person using the drug.

Marijuana has sometimes been called an aphrodisiac, however, there is no evidence that it stimulates sexual desire or potency. Its use, like the use of alcohol, may reduce inhibitions.

Some commonly experienced short-lasting psychological and social responses to marijuana intoxication (low dosage) are: euphoria (a high or heightened sense of well-being), a feeling of detachment and relaxation, a feeling that sensations are more intense, changes in the perception of distance and time, the tendency to be easily distracted, disruption in thought and speech, increased suggestibility, increased sense of sociability, and hilarity.

These are the experiences of a mild marijuana "high."

The effects of very high doses of THC resemble those of the more potent hallucinogens such as LSD, including psychotic behavior. In a recent THC experiment, most subjects on very high doses experienced marked distortion in visual and auditory perception, de-personalization (a feeling of being separated from one's body), a feeling of unreality, and sedation. High doses have, in some cases, led to temporary auditory and visual hallucinations, panic, or, rarely, acute psychotic episodes. Violent behavior is uncommon.

Long-Term Use

Cannabis preparations such as hashish, which contains high concentrations of THC, have been used for centuries in some Eastern countries. Long-term heavy use of these preparations appears to degrade persons in much the same way that chronic alcoholism does. There is neglect of health and appearance, incapacity for work, personality change, apathy, and loss of normal social or family life. Although some of these effects have been noted in human subjects in controlled experiments with THC by scientists in the U.S., cause and effect relationships have not yet been demonstrated. However, until a few years ago, it was not known that long-term tobacco smoking can cause or contribute to serious diseases of the lungs and heart.

Experimental Studies

Although research on the effects of marijuana has been done in the past, the recent increase in the use of the drug has stimulated an increase in experimental studies, especially since the identification and synthesis of THC, the development of analytic techniques, and the availability of standard cannabis preparation have provided researchers with a basic tool, the ability to quantify doses.

A recent study by F.T. Melges, et al., using humans to determine the effects of orally administered THC, indicated that the THC impaired performance on arithmetical tasks. The impairment increased with increases in dosage and persisted for as long as 5½ hours after administration of the highest doses. The study showed that long-term memory operations were not significantly impaired, but that short-term memory was impaired by the THC.

Dr. R.C. Pillard reports three types of acute adverse psychologic reactions: reactive fright and panic; toxic psychosis marked by symptoms of thought disorganizations, paranoia, de-personalization, and hallucinations; and "flashback," a condition in which the subject suddenly feels the drug effect even though he has not used the drug for days or weeks. John A. Talbott and J.W. Tague, who studied 12 cases of acute toxic psychosis in soldiers in Vietnam, indicate that it appeared to be a valid clinical syndrome. All 12 cases were first-time users and 11 of the 12 cases were diagnosed by more than one psychiatrist.

Clinical observers are now finding certain adverse effects in patients being treated for psychiatric problems. Dr. Harold Kolansky and Dr. William Moore have reported adverse psychological effects in 38 individuals from age 13 to 24 who smoked marijuana two or more times. Although they had seen many other patients

who had used marijuana, this group of 38 was analyzed because they had used no other drugs and did not show a predisposition to serious psychiatric problems. Their study demonstrates "the possibility that moderate-to-heavy use of marijuana in adolescents and young people without predisposition to psychotic illness may lead to ego decompensation ranging from mild ego disturbance to psychosis."

Another clinical observer, Dr. Harvey Powelson, who has treated many students in his position as psychiatrist at the University of California at Berkeley, has found neurologic signs, symptoms, and psychological effects similar to those reported by Dr. Kolansky and Dr. Moore.

The belief that marijuana use almost invariably leads to the use of heroin stems from the observation that most heroin addicts used marijuana prior to the first use of heroin. Until recent years, statisticians did not look first at marijuana smokers as a group to determine how many of them went on to use heroin. Nor did they look for other reasons that might account for the use of both marijuana and heroin.

Marijuana and Heroin Addiction

Recent analyses of new data have gone beyond the assumption that there is a simple, direct relation between marijuana and heroin use. They lead to three conclusions:

(1) Some marijuana users go on to use heroin, but the incidence varies in different kinds of groups. As few as six per cent of one group of college students who used marijuana were known to have used opiates. In a group of urban black men in their early thirties, about a fifth of those who had ever used marijuana later turned to heroin.



(2) Other factors appear to be as important as marijuana in predicting eventual heroin use. In the case of the college students, it was a feeling of alienation. In the case of the black men, it was teenage delinquency.

(3) The sequence from marijuana to heroin does not appear to be inevitable. If such a sequence does occur, it may be the result of the person's group life, his contact with drug peddlers, or the particular needs these drugs fill in his life.

Marijuana is clearly involved in use of other illegal drugs. It is prominent in a new pattern called "poly-drug use" whereby a person uses a wide range of drugs deliberately to bring about desired moods and motives. Several recent studies show that marijuana use, especially if frequent and in large doses, is closely allied to dependence on other drugs and to polydrug use. The question still remains as to the reason why it is so called. Frequent use of marijuana may facilitate the progression to "hard" drug use—through commitment to the drug-using group, through buying and selling, and through the desire for the effect of mind-altering drugs.

The setting for almost all first use of marijuana is a group. Sometimes young people find that marijuana smoking is the key to acceptance by a group. If the group includes members who are "chipping" heroin, (using it at irregular intervals), there is a chance that new members of the group may be tempted to try it. If the group includes LSD users, this route is also open. The more closely a person is tied to a drug-using group, the more likely he or she will wind up using drugs. The power of groups to encourage or discourage the behavior of its members is enormous.

Conclusion

Marijuana has become the focal point and symbol of a social controversy in which the essential question is, "To what extent may society limit an individual's use, possession, and disposition of substances which can be physically and psychologically harmful and others?" The implications of this question are social, moral, scientific, political, and legal.

A conclusive answer to the consequences of marijuana use is not possible today. Scientific evidence presently available indicates that the drug has both physical and mind-altering effects similar to other hallucinogens and lacks medicinal value. The clouds of controversy surrounding marijuana use will not be quickly dissipated by scientific fact.

An increasing number of research reports on marijuana indicate that, at the very least, the drug is a

dangerous substance which, depending on the dosage, can be the cause of varying amounts of temporary loss of physical and mental function. Research now in progress, in the opinion of many experts, is not expected to reverse this finding.—Washington, D.C. (AFPS). ☞

NOTES FROM THE MC DETAILER

1. For those medical officers planning RAD for civilian residency or practice there will be no early outs for this fiscal year. It is anticipated that the summer hiatus will necessitate that each medical officer fulfill his obligated service.

2. A reminder for those who are planning a transfer: the Annual Officer Billet Summary, NAVPERS 15993 (Confidential) is available from your personnel officer in the classified documents section. This publication originates from PERS B-1001.

3. Due to continued limitation of PCS (Permanent Change of Station) funds medical officers rotating from sea duty will be assigned to the home-port area.—Code 3172, BUMED. ☞

TONOMETER CLEANING

Some medical activities are using benzalkonium chloride solutions to "sterilize" Schiotz tonometers after each patient as suggested by the manufacturer. In those cases cited, the procedure which was generally followed included bathing the instrument in the benzalkonium chloride solution for the period of time suggested by the manufacturer, and then rinsing it thoroughly with tap water. Unfortunately, however, this procedure has resulted in a number of acute conjunctival and corneal reactions to the benzalkonium chloride.

In order to minimize such incidents, the following guidelines for the proper care and cleaning of tonometers have been offered by CAPT Roger Stevenson, MC, USN, one of our senior ophthalmologists. These same guidelines are used by most of our hospital Ophthalmology Services:

1. When a patient does not show evidence of conjunctival or corneal disease, it is the consensus of most authorities that complete sterilization of the tonometer is not necessary after each use. In these instances, the footplate and plunger tip need only be wiped with a clean facial tissue until thoroughly dry. The tonometer is then ready to be used on the next scheduled patient.

2. At the end of each working day, the footplate-plunger mechanism should be *disassembled* and cleaned with water or a suitable mild aqueous disinfectant such as benzalkonium chloride 1:5000 dilution first, followed by an application of 95% alcohol. The disassembled parts should then be rinsed with water and thoroughly dried. Facial tissues or 2 x 2s may be used in cleaning and drying the footplate and plunger. Pipe cleaners may be used to aid in cleaning and drying the cylinder in which the plunger rests. If indicated, the tonometer may then be autoclaved.

3. In those cases when the tonometer is used on a patient who presents evidence of conjunctival or corneal disease, the instrument should be: cleaned immediately after use, as outlined in the foregoing paragraph; sterilized in a steam or gas autoclave; and then cooled *thoroughly* before use.

4. Except for those cases mentioned in paragraph 3, tonometers need be sterilized only at the end of each working day — or perhaps only at the end of each week if usage is generally limited to three or four patients per day. Routine sterilization should be by steam or gas autoclave, or by dry-heat methods *after* the instrument has been thoroughly cleaned as outlined in paragraph 2. **IT IS REEMPHASIZED THAT STERILIZED TONOMETERS MUST BE ALLOWED TO COOL THOROUGHLY BEFORE BEING USED ON A PATIENT. DO NOT TAKE SHORT CUTS ON THIS!**

It is hoped that the foregoing information will help to prevent accidental chemical irritation of the eye caused by sensitivity reactions to the benzalkonium chloride "sterilizing" solutions. ☹

FORMULARY NOTES

Oral Penicillin

Oral penicillin is frequently prescribed by pediatricians and general medical officers for treatment of many pediatric infectious diseases. Two forms of the drug product are available to the practitioner: oral penicillin G and phenoxymethyl penicillin (Penicillin V).

Although equally effective when properly administered, phenoxymethyl penicillin is most often prescribed, particularly for routine strep throat and ear infections. Most prescribing physicians are not aware that there is a 26% cost differential, and that phenoxymethyl penicillin is the more expensive product.

The BUMED Consultant in Pediatrics notes that oral penicillin G should be administered between meals (1 hour before or 2 hours after) to ensure maximum effectiveness. He further recommends a strong

educational program for pediatricians, general medical officers and all others who see children. Routine use of oral penicillin G by these physicians would effect a significant saving Service-wide. Local savings accrue to the command, and become available for more appropriate expenditure.—CAPT L. M. Fox, MC, USN; Chairman, BUMED Formulary Review Committee. ☹

TRAVELING FELLOWSHIPS AND SCHOLARSHIPS

The American College of Physicians
4200 Pine Street
Philadelphia, Pennsylvania 19104

The American College of Physicians annually offers several Traveling Scholarships, two of which are particularly directed toward the field of endocrinology. The aim of these scholarships is to provide an opportunity for worthy young physicians, preferably Members of the College, to spend a month, more or less, as visiting fellows at some institution or institutions, for observation and postgraduate study. The Committee on Fellowships and Scholarships of the College facilitates opportunities for these scholarships at outstanding institutions where a month's observation, contact and study will be an exceptional inspiration and a practical source of training. The stipend of \$500 is used for payment of travel expenses, in whole or in part. Recipients are chosen and institutions designed by the Committee on Fellowships and Scholarships, approved by the Board of Regents of the College.

Interested Members of the College shall file application on or before October 15 each year; recipients will be selected by the Committee on Fellowships and Scholarships and the Board of Regents at their mid-November meeting. Scholarships will be arranged to start after the following January 1, at the convenience of the recipient and the preceptor or institution.

Royal Society of Medicine Foundation, Inc.

The Royal Society of Medicine Foundation has a very worthwhile program supporting American Traveling Fellowships. In 1970, for the academic year 1971-72, each of eight American Traveling Fellows, selected from 52 applicants, was awarded a grant of \$2,500 to visit the United Kingdom for a period of three months to pursue research. Seven Traveling Fellows have so far completed their visits to the United Kingdom, three are still there, and reports of those who have returned to the U.S. leave no doubt about the value of this

program. Copies of the program can be obtained by donors on request to the Royal Society of Medicine Foundation, Inc., 20 Broad Street, New York, New York 10005.

Another project of the Foundation is a joint participation with the Royal Society of Medicine in a campaign to make the Society and its services better known in North America. American physicians who are aware of the advantages of membership in the Society should be interested in knowing that members of the American College of Physicians are eligible for election as Affiliate Members of the Society upon confirmation of their ACP membership. Application forms can be obtained either from the Royal Society of Medicine, 1 Wimpole Street, London, W1M SAE, or from the American College of Physicians, 4200 Pine Street, Philadelphia, Pa. 19104.

Interested Navy Medical Corps officers are encouraged to directly correspond with either of these professional societies.—Code 316A, BUMED. 🇺🇸

DENTAL SCHOLARSHIPS

The initial group of students selected for the new Naval Dental Scholarship Program has reported. Now on active duty at their respective schools, they are identified as follows:

First Year Level (11)

<i>Name</i>	<i>School</i>
Albright, Robert L.	Emory
Biedermann, Kurt G.	Pennsylvania
Elstner, Earl T., Jr.	Pittsburgh
Hill, Augustyne V., Jr.	Meharry
Olsen, Dearn P.	Washington
Remington, David N.	Nebraska
Richardson, Bryan L.	Southern California
Ruliffson, Mark H.	Missouri
Trapp, John E.	Pennsylvania
Williams, Gregory (n)	California (San Francisco)
Woofter, Dennis D.	Missouri

Second Year Level (7)

Andrews, Paul A.	Marquette
Common, John (n)	South Carolina
Kroen, Gregg R.	Ohio State
Larson, Mark P.	Marquette
Lockwood, Jeffrey L.	Georgetown
Paul, David B.	Missouri
Simpson, James W.	Creighton

Third Year Level (7)

<i>Name</i>	<i>School</i>
Boyer, Thomas J.	Virginia
Davidson, Richard A.	Maryland
Evans, William R., III	Washington
Frleigh, Edward M.	Iowa
Given, John W.	Southern California
Gregory, Eugene W.	Virginia
Tarquino, George J.	Pittsburgh

Fourth Year Level (5)

Ewald, Franklin H.	Temple
Glick, Jeffrey A.	Northwestern
Herrmann, Robert C.	Fairleigh Dickinson
Spann, Charles E.	Texas
Towle, Herbert J., III	Georgetown

It is interesting to note the following:

- (a) Number of candidates — 460
- (b) Number selected — 30
- (c) Of 19 upperclassmen selected from 311 applicants, 149 were enrolled as 1925 officers (48%)
- (d) All selected juniors and seniors were 1925 officers. Other selectees include: one active duty dental technician, three marines and three line officers. 🇺🇸

BELLY BOARD AWARD TO CAPT WILSON

CAPT Theodore H. Wilson, MC, USN, Chief of Surgery at the Bethesda Naval Hospital was presented the third annual Belly Board Award by CAPT William M. Lukash, MC, USN, Head of Gastroenterology Clinic and Research Branch. The Belly Board Conference, moderated by Dr. Raymond B. Johnson, is a very popular and informal gathering of interns, residents, and staff members interested in problems related both to the medical and surgical management of digestive diseases. CAPT Wilson was cited for his outstanding contributions as both a surgeon and teacher. He is described by Dr. Lukash as one of the Navy's most outstanding surgeons whose technical skills and precise surgical techniques are widely known throughout the Navy by his many colleagues and by the many surgical residents and junior staff members who have trained under him. In addition, Dr. Wilson utilizes his extensive knowledge of anatomy to provide exacting surgical demonstrations in the operating room. His knowledge and highly articulate manner of presentation represent the highest caliber of surgical teaching. CAPT Wilson has continually promoted close cooperation between

members of the surgical staff and the Gastroenterology Branch. In addition, his personal warmth and more perceptive approach to total patient care provide for earlier diagnosis and better management. Through his contributions as a physician and teacher, his personal dedication and devotion have been highly respected throughout the hospital.

CAPT Donald Custis, MC, USN, Commanding Officer of the Naval Hospital, at the same meeting presented a letter of commendation to CDR Michael F. Fornes of the Gastroenterology Branch, for his outstanding professional performance at the Bethesda Naval Hospital. Dr. Fornes subsequently reported to the Naval Hospital, San Diego, where he joined the medical staff as Head of the Gastroenterology Branch.

SHARE YOUR JOURNALS

The Royal Thai Navy (RTN) Medical Department has a distinct need for medical textbooks and journals. Most RTN medical department personnel are well versed in the English language and normally use U.S. medical publications to keep abreast of current medical trends. However, due to a lack of adequate funds, much of this important literature is not readily available to them. The medical libraries at the four hospitals are in desperate need of current printed medical materials.

It is requested that our U.S. Naval Hospitals be canvassed for any excess or no-longer-needed medical texts, training manuals and/or journals that could be donated to the Royal Thai Navy Medical Department as a good will "People-to-People" gesture.

Please forward any of these materials to:

E.J. Irvin, CDR, MSC, USN
Box 326
USMACTHAI/JUSMAGTHAI
A.P.O. San Francisco, Calif. 96346.

SURGEON GENERAL CITED FOR DISTINGUISHED SERVICE

VADM George M. Davis, Surgeon General of the U.S. Navy, received the Distinguished Service Award of the Federal Hospital Institute Alumni Association in ceremonies held in Chicago, Ill. He is the seventh recipient of this annual award, presented each year to an individual who, in the judgment of the Association, has made outstanding contributions to the Federal Medical Services in the field of hospital administration.

The presentation was made on 23 August at the

Association's Annual Luncheon Meeting, held this year in McCormack Place incident to the Annual Convention of the American Hospital Association.

Admiral Davis, who is the 25th Surgeon General of the Navy, assumed the office on 1 February 1969. He is certified by the American Board of Internal Medicine and is a Fellow of the American College of Physicians, the American College of Cardiology, and the American College of Chest Physicians. As Surgeon General he commands some 84 major medical facilities throughout the world. During his 32-year naval career he has served at a variety of duty stations, including command of Naval Hospitals in Yokosuka, Japan, and Bethesda, Md.; and the National Naval Medical Center in Bethesda. He served as Deputy Surgeon General for one year prior to assuming his current position.

VECTOR CONTROL COURSE

A one-week course for Vector Control Specialist Recertification is scheduled for 15-19 November 1971 at the Disease Vector Ecology and Control Center, NAS, Jacksonville, Fla. The course is open to Medical Department personnel of the Navy and Coast Guard who have completed PMT school or who have been previously certified in vector or pest control by either DVECC, Alameda, Calif., or Jacksonville, Fla.

The objective of the course is to review pest biology and control, and to discuss recent pest control procedures. Satisfactory completion of the course will result in recertification as a Vector Control Specialist.

Further information and quotas can be obtained from this Center: Navy Disease Vector Ecology and Control Center; Box 43, Naval Air Station, Jacksonville, Fla. 32212. AUTOVON: 942-2425, 904-772-2424.

CORRESPONDENCE COURSES

Manual of the Medical Department

The recently revised correspondence course, "Manual of the Medical Department, Part I," (NavPers 10708-B) is now available for enrollment to officers and enlisted personnel on reserve or active duty status within the Navy Medical Department.

The course contains four (4) objective-type assignments and is evaluated at six (6) points for purposes of Naval Reserve retirement. Naval Reserve personnel may be credited with retirement points upon satisfactory completion of the course, if eligible to receive

them under current directives. Personnel who have completed the earlier versions may receive additional point credit for completing the revised course.

This course is based on Chapters 1 through 11 of the Manual of the Medical Department, NavMed P-117. It presents the administrative functions and organization of the Bureau of Medicine and Surgery and its facilities. The relationships within BUMED, the management of naval medical facilities, the duties of Medical Dept. personnel, and the structure of the five corps of the Medical Department are correlated and defined. The course is recommended for Medical Department personnel, especially those concerned with administrative duties.

Requests for enrollment by all personnel should be forwarded via official channels on NavPers form 1550/4 with appropriate changes in the "to" line, to:

Commanding Officer
Naval Medical School
National Naval Medical Center
Bethesda, Maryland 20014.

Attn: Correspondence Training Department

Occlusion

The Naval Graduate Dental School is offering a new correspondence course for dental officers, *Occlusion*, NavPers 13114. It is the first time a correspondence course on this subject has been developed. With the addition of the new course, the Naval Dental Corps now makes 16 correspondence courses available to dental officers.

The four-assignment course is based on the text *Occlusion*, edition 2, by S. P. Ramfjord and M. M. Ash, Jr. It offers a critical appraisal of various longstanding and current concepts of occlusion and includes the authors' principles of diagnosis and therapy as applied in the management of occlusal problems. Subjects covered include the anatomy and physiology of the masticatory system; the characteristics, diagnosis, and treatment of functional disturbances of the masticatory system, and; adjustment, splinting, and minor movement of the teeth to correct malocclusion.

For naval personnel eligible to receive retirement points, eight points will be creditable on completion of the course. 📺

AVAILABLE FILMS

Recent motion pictures produced by the Naval Medical School, NNMC, Bethesda, Md., cover a wide range of interest for both medical and paramedical personnel. A brief list of these follows.

a. SICK CALL: SKIN DISEASES (MN-10611), 32 minutes. A Navy dermatologist shows some 30 patients with skin conditions that most commonly confront the hospital corpsman at sick call. The film emphasizes the recognition of skin diseases and offers some suggestions for treatment.

b. SICK CALL: INTRODUCTION TO SICK CALL TECHNIQUES (MN-10613), 26 minutes. This film offers the corpsman, especially the man on independent duty, useful ideas about organizing his time and efforts in conducting sick call. A number of different cases are presented to demonstrate the principles of a well-organized system, utilizing the acronym ALERT: Ask, Listen, Examine, Record and Treat or Transfer.

c. VASECTOMY (HB-PMB-021) shows in detail the technique practiced by the staff of the Urology Clinic, Naval Hospital, Bethesda, and includes suggestions for conducting the interview with husband and wife, the patient's part in preparing for the operation, and the postoperative examination. The Surgeon General has instructed that transscrotal vasectomy is to be done only by fully trained general surgeons or urologists, or other physicians in a training status under their supervision. This 23-minute film is a valuable aid in that training.

d. CATHETERIZATION OF THE MALE AND FEMALE (MN-11037), 23 minutes. This film is primarily for paramedical personnel and demonstrates step-by-step the procedures of catheterization. Detailed attention is given to the care required to avoid contamination, especially when the purpose of catheterization is to obtain a specimen of urine for culture or microscopic examination. The film shows the use of both straight and retention catheters, and augments its live-action scenes with animation, to emphasize the reasons given for certain steps in the technique.

e. EMERGENCY DENTAL TREATMENT (MN-11042), 28 minutes. The film offers information on recognition and diagnosis, and demonstrates treatment techniques for a number of disorders including toothache, pericoronitis, periodontal abscesses and necrotizing ulcerative gingivitis.

These films are distributed to naval hospitals and corps schools. If unavailable through these channels, copies can be obtained on short-term loans from the Medical Film Library, Naval Medical School, NNMC, Bethesda, Maryland. (It should be noted that VASECTOMY (HB-PMB-021) is a technical film report and is limited to distribution by the Medical Film Library, Naval Medical School.)—LCDR T.W. Hard, MC, USN; Head, Media Department, Naval Medical School, NNMC, Bethesda, Md. 20014. 📺

OFFICIAL INSTRUCTIONS AND DIRECTIVES

FM SECNAV TO ALNAV (56)

Subj: Navy Lodge Program

Ref: (a) OPNAVINST 11107.1A

(b) BUPERSINST 11107.1

1. The lack of adequate low-priced temporary lodging accommodations for Navy personnel and their dependents traveling on permanent change of station (PCS) orders continues to be a matter of concern to me. In order to enhance the attractiveness of the Navy as a career, a number of temporary lodging units, now known as Navy Lodges, were placed under construction in 1970. These are modern motel-type accommodations which will sleep six and include kitchen facilities. The Navy plans to have additional units constructed in future years until our most urgent needs for this type facility are met.

2. Sites for the first 900 units are Norfolk, Little Creek, Newport, New London, Bethesda, Charleston, Memphis, Pensacola, Miramar, Lemoore, North Island, San Diego and Alameda. Utilization of Navy Lodges now in operation at Norfolk, Little Creek, Lemoore and Alameda indicate to me that many PCS travelers are not aware of these facilities which will greatly reduce out-of-pocket expenses during moves. All of these new units rent for \$8.00 per day regardless of family size. Personnel on PCS orders may make reservations well in advance and reservations are accepted on an 80 percent-20 percent ratio between enlisted and officer personnel. Other authorized users such as POW wives and dependents, active duty personnel not on PCS orders, retired personnel, and official guests and visitors may utilize Navy Lodges if there are vacancies after 1800 daily.

3. I desire that the availability of Navy Lodges be given the widest possible dissemination by all commanding officers in appropriate media and that all personnel being detached on PCS orders be personally advised of the existence of these accommodations. Reference (b) provides a current listing of Navy Lodges and is updated periodically as new facilities become available.

FM CNO TO NAVOP (136)

*Subj: MAC Space Available
Registration Procedures*

1. The services have jointly agreed on a new policy on space available travel which promises significant improvements over all previous policies with obvious

resulting benefits to service members and their dependents. This new policy will be established on a worldwide basis, effective 1 Sept 1971.

2. The new procedures eliminate the twice weekly validation requirement. The space available passenger will sign up only one time. Thereafter, he will not have to verify or validate his status on the roster through any type roll call or periodic appearance, but he must be present the first time his name is called for the flight. The new system is expected to be responsive to the travel ready passenger and provide a more realistic list of persons ready to travel.

3. When the space available passenger signs up, he will be able to determine how far down the list he is, and by checking the flight schedule board, he will learn of those flights that may offer space available seats for his particular destination. All scheduled and opportune flights which may offer space available seats will be posted a minimum of 24 hours in advance. When space available seats become known to the terminal personnel, usually one and one-half to two hours before flight time, names will be called in the terminal from the roster until the seats are filled. If an individual name is called and he does not respond and make the flight, his name will be removed from the list. A passenger is not charged, however, with missing a flight if called for an opportune flight not posted 24 hours in advance.

4. Applicants for space available travel must register personally in the MAC Air Passenger Terminal. Registrants should be fully aware that there is no assurance that space will become available and that space available assignments are made on a first-come, first-serve basis within the categories as set forth in OPNAVINST 4630.12C, with Ch-1. Additionally, applicants must present the documentation as indicated in BUPERSINST 4650.16 when first registering for space available.

FM CNO TO NAVOP (141)
(quoted in part)

*Subj: Minimum Three Year
Projected Sea Tours*

In order to improve stability in the operating forces and in the personal lives of our enlisted personnel, three years is being established as the minimum length for all projected sea tours. For the majority of personnel whose sea tours will be increased to three years, the associated normal shore tour will also be lengthened.

FM CNO (Z-94) TO NAVOP

Subj: *Navy Drug Exemption and Rehabilitation Program*

Ref: (a) SECNAVINST 6710.2

1. By reference (a) the Secretary of the Navy established a Drug Exemption Program for all members of the Naval Service.

2. The purpose of this program is to enable a drug user or possessor to obtain needed medical and other rehabilitative help without the fear of disciplinary action under the UCMJ or separation from the service with a discharge under other than honorable conditions. Exemption from these actions under the terms of reference (a) means that a drug user or possessor who qualifies for the program will be exempt from disciplinary action and discharge under other than honorable conditions for drug usage and possession for the purpose of personal usage that he discloses. It does not preclude modifications of security clearance, duty assignment, flight status or other personnel or administrative action determined necessary by appropriate authority. However, commands are encouraged to initiate restoration of such clearance and assignment to the individual when his rehabilitation progress and other considerations will permit.

3. Major points and instructions for this program are as follows:

a. Each command shall designate in writing one or more "Exemption Representatives" for their command. The following personnel shall not be so designated: chaplains, medical officers, legal officers, naval investigative service personnel, discipline officers, master-at-arms, or personnel whose primary responsibility is the detection and investigation of criminal offenses. Exemption Representatives must have the necessary interest, maturity, responsibility, and verbal skills. They may be officers or qualified petty officers.

b. Exemption will be granted for the illegal use or possession incident to such use of controlled substances as defined in Art. 1270 of U.S. Navy Regs, 1948. It extends only as far as the disclosures of the individual are concerned. Exemption will not be granted for drug related or drug induced offenses nor for the sale or transfer of drugs. Exemption is not dependent upon the number of previous usages nor the degree of involvement of the user.

c. Exemption affects only non-judicial punishment, court-martial action, and separation with an undesirable discharge.

d. Exemption can be granted only once. If an individual subsequent to obtaining exemption again engages in the illegal use or incident possession of

drugs, he may not obtain exemption for such activities under the terms of this instruction. However, cognizant commanders should make their determinations as to the extent of disciplinary action, if any, to be taken on the basis of such activities with a view toward effectuating the purposes of the exemption program. Thus, if it appears that an individual who has obtained exemption is making significant progress in a rehabilitation program, commanders should carefully consider this fact in determining what action to take on the basis of the drug violations subsequent to the grant of exemption.

e. In order to qualify for exemption, disclosures must be made to a specified Exemption Representative.

f. The Exemption Representative, prior to any voluntary disclosure, shall fully advise a member seeking exemption of the scope and limitations of this program.

g. Upon discharge, and demonstrated sincerity in seeking help, the member shall be granted exemption in accordance with the procedures of reference (a). Exemption, once granted, is irrevocable. A member must declare his intention to cooperate fully in his own rehabilitation, and this shall constitute sufficient evidence of his sincerity for the purpose of qualifying for exemption.

h. Exemption applies only to disclosures which are voluntary. This means disclosures must be made prior to apprehension or warning under Art. 31, UCMJ for the offense in question. This program is not, repeat not, to be used as a program for the development of informers, and applicants for exemption are not required to identify other drug abusers as a condition for obtaining exemption. However, if in an exemption disclosure other military personnel are named for use or possession of drugs for personal use or if identified in an approved testing program, these members shall be informed by their command that they have been identified for such drug use or possession and shall be warned of their right to counsel. Such identified personnel whose named drug involvement is limited to their own personal use or possession incident to such use shall be informed that they may apply for exemption within 24 hours. If they apply within 24 hours they will be considered to have met the test of voluntariness.

i. Disclosures made in seeking exemption are not privileged in that they may be used for purposes other than non-judicial punishment, court-martial action, or separation of the applicant with an undesirable discharge.

4. Regardless of whether or not a Navyman has

applied for exemption from disciplinary action or undesirable discharge, it is the policy of the Navy that all Navy men will be given assistance in overcoming drug abuse problems. Detailed administrative procedures for handling these cases will be promulgated in the near future by BUPERS. However, in general the policy will be as follows:

a. Hard narcotics and dangerous drugs. The Navy Drug Rehabilitation Center has been established at NAS Miramar primarily for the treatment and rehabilitation of individual abusers of hard narcotics and dangerous drugs, and it is anticipated that a similar center will soon be established on the East Coast. It is anticipated that these centers will be utilized as follows:

(1) Individuals who are found to be abusing the aforementioned drugs will first be referred to the nearest local medical facility for consultation to determine whether or not the individual is drug dependent. If the individual is found to be drug dependent, he will be "transferred for treatment" to nearest naval hospital for detoxification and/or treatment incident to transfer to the Miramar (or East Coast) Drug Rehabilitation Center.

(2) If the determination is made that the individual is not drug dependent, every effort should be made to rehabilitate him at the local level.

(3) However, all personnel discovered to be users of the aforementioned drugs who are intended to be discharged within 30 days must be processed through the Miramar (or East Coast) Drug Rehabilitation Center, unless they are determined by medical opinion to be experimenters only, and have an excellent prognosis for remaining off drugs.

b. Other drug substances (marijuana, hashish, etc.). Those individuals who are identified as having drug abuse problems with drug substances such as marijuana or hashish should initially be counseled and treated at the local command level, or a locally established drug control center.

5. I am very personally concerned that we make every effort to prevent any further spread of drug involvement in the Navy and at the same time assist those shipmates who unfortunately have already become involved. To assist you the Chief of Naval Personnel has developed a five point program that we will promulgate by separate message. With the cooperation and support of all hands, this exemption program can provide assistance to those individuals who are sincere in seeking help.

FM CNO (Z-98) TO NAVOP
(summarized)

*Subj: Advance Information About
New Duty Stations*

*Ref: (a) OPNAVINST 11101.13 series
(b) NAVOP Z-07 NAVOP Sponsor
Program*

Navy men moving to new duty stations need advance information about housing and other facilities available to them. A forthcoming revision to reference (a) will provide for housing applications to be forwarded by the new duty station to personnel desiring housing. The new duty station will respond with housing information that will assist the incoming family in reaching a decision concerning housing. The Sponsor Program, reference (b), should improve the flow of information, including housing information, to the transferring family. The full benefits of the advance information, Family Service Centers, Housing Offices and Housing Referral Offices can provide real help to the Navy family during moves. In order to realize these benefits, both the receiving and detaching commands must assist the transferring man and his sponsor at the new duty station. The value of this assistance is contingent upon the timely exchange of adequate information. Most shore activities forward valuable information packets on housing and other facilities. Those activities not currently doing so are encouraged to consider such a program.

FM CNO (Z-99) TO NAVOP
(quoted in part)

Subj: Officer Swords

*Ref: (a) U.S. Navy Uniform
Regulations, 1969*

Several retention study groups have pointed out that many junior officers have little need for a sword and for non-career officers the cost is disproportionate to use. While I believe the sword is an important factor of prestige and tradition, I also recognize the logic of the argument presented by the retention study groups. Therefore, the requirement for lieutenants and below to purchase this item as a personal article of uniform is optional upon receipt of this message. This provision will be incorporated in the next change to reference (a).

BUMEDINST 6250.13 OF 25 JUN 71

Subj: Pest Control Aboard Naval Vessels
Ref: (a) SECNAVINST 6530.54A

Outlines policies and responsibilities and provides guidelines for effective and safe control of cockroaches and other pests aboard naval vessels. Reference (a) assigns commanders afloat the responsibility for maintenance of control programs, requires that a medical department representative procure approved pesticides and supervise operations, and designates preventive medicine units and disease vector control centers as the activities that provide technical advice, assistance and training support to the fleet.

BUMEDINST 6470.10 OF 19 JUL 71

Subj: Irradiated or Radioactively Contaminated Personnel; initial management of

Provides specific instruction to medical officers on the immediate management and treatment of irradiated or externally and/or internally radioactively contaminated patients. This directive applies to all naval facilities and Navy-sponsored programs or operations in which the potential for radioactive contamination or excessive radiation exposure exists, and those hospitals or dispensaries of adjacent commands which may normally assist in the event of serious occupational radiation injury or illness. The instruction covers the period of time between the actual exposure of personnel and the time that the individual is either returned to duty, or treated definitively under the guidance of a physician knowledgeable in radiation effects.

BUMED NOTICE 6224 OF 14 JUL 71

Subj: New Tuberculin PPD Preparation; recommendation against the use of
Ref: (a) MANMED Art. 15-91
(b) BUMEDINST 6224.1C
(c) FLDBRBUMED NOTICE 6700, NMDMB No. 5-71 of May 71, p. 10 of encl (1)

Advises that certain tuberculin purified protein derivative (PPD) preparations are *not* to be used for routine tuberculosis case-finding programs conducted in accordance with references (a) and (b).

Reference (c) notes that a new stabilized type PPD

solution is now available in the DOD Supply System. Although this solution offers the advantages of being premixed and stabilized, this Bureau has been advised that the preparation will result in a higher percentage of positive reactions than the previously standardized PPD because of a relative increase in potency.

Orders for intermediate strength tuberculin PPD for Navy and Marine Corps use should continue to be for the preparation which is in tablet form accompanied by buffered diluent, FSN 6505-782-2673 (10 tests) and FSN 6505-782-2676 (50 tests). DO NOT ORDER the new preparation "stabilized tuberculin PPD solution-Panray" FSN 6505-420-9584 and -5.

BUMED NOTICE 6530 OF 11 AUG 71

Subj: Testing of Donors of Whole Blood and Plasma for Transfusions for Hepatitis-Associated-Antigens (HAA); information concerning

Advises addressees of the impending requirement for subject testing and outlines current plans and policies for the HAA program; advises selected activities in CONUS with blood banking capability of procurement action to be initiated by BUMED; advises of arrangements for training technicians; and to announce the 1 Oct. 1971 commencement date of the HAA testing program. To facilitate this action, the American Red Cross has consented to render assistance in the training of a minimal number of technicians in the HAA testing technique. Training of additional personnel is to be accomplished locally by utilizing the ARC trained technician. More definitive information will be published in the near future at which time the program will be expanded to include overseas activities.


BUMED NOTICE 6710 OF 15 JUL 71

Subj: Antirabies Serum, 1000 Units, FSN 6505-634-7279

Announces critical shortage of antirabies serum, and promulgates interim procedures for procurement and stocking of the serum.

BUMED NOTICE 6710 OF 3 AUG 71

Subj: Formulary Notes, Vol. I, No. 2

Transmits a listing of probably effective drug products as a result of the most recent action taken by the Food and Drug Administration (FDA) to implement the National Academy of Sciences/National Research Council (NAS/NRC) Study on Drug Efficacy. 

NAVY-WIDE WORKSHOP CONCERNING HELIUM SPEECH

The three-day workshop on "The Processing of Helium Speech" will be conducted by the Naval Submarine Medical Research Laboratory at the local Submarine Base, 18-20 August 1971. This workshop, which is sponsored jointly by BUMED and the Office of Naval Research, will bring together Navy scientists and operational personnel, Naval and independent contractors, and several international scientists who have been active in underwater communications. CDR J.D. Bloom, MC, USN, Officer-in-Charge of the Laboratory, indicated that the group of approximately 45 participants will review the present state of speaking within ocean environments and consider future developments needed for more reliable speech communication among deep sea divers who are required to breathe helium-oxygen mixtures under pressure.

Among the distinguished international scientists who will be attending this workshop are Dr. Jan Lindqvist and Mr. Thomas Murray from the Speech Transmission Laboratory of the Royal Institute of Technology, Stockholm, Sweden; and Dr. J.S. Gill, from the Admiralty Research Laboratory, Teddington, England.

Dr. Charles F. Gell, Scientific Director of the Naval Submarine Medical Research Laboratory, recognized the need for this type of seminar and was instrumental in guiding it in the formative stages. Dr. Russell L. Sergeant, who directs the voice communications research program at the Laboratory, is in charge of arrangements for the Workshop. He is assisted by LT Thomas Murry, MSC, USNR, speech scientist.

The success of underwater operations depends on efficient voice communications. A problem arises when the physiological requirement to breathe helium-rich gas mixtures at deep depths interferes with the production of intelligible speech. The resulting speech, or "helium speech" is generally referred to as "Donald Duck" speech. In an effort to eliminate this problem, the group will review the many efforts which have been made over the past five years in helium-speech processing, and attempt to unify future efforts and approaches to the problem. They will review the effectiveness of various pieces of equipment, such as "unscramblers" which have been developed in an effort to make speech among divers more intelligible. There will be demonstrations of some of the newer types of equipment. These demonstrations will include an interesting new development in the recording field called "quadrphonics."

As soon as possible after the close of the Workshop, the proceedings will be published as a regular Naval

Submarine Medical Research Laboratory report.—PAO, Nav Sub Med Center, Nav Sub Base, New London Groton, Conn. 06340

THIRTY-DAY HABITABILITY STUDY

To test the effects of exposure to active sonar noise of the type that crew members of future submarines may have to live with, ten volunteer subjects began an experiment at the Naval Submarine Medical Research Laboratory on August 6th, which will involve their being confined in the Sound Suite there for a 30-day period.

The study is designed in part to develop criteria for acceptable noise levels from the standpoint of habitability of general living spaces aboard Navy vessels, and specifically, to determine whether there are any behavioral or biomedical changes in men exposed to active airborne sonar emissions over a twenty-five day period. It is only recently that noise pollution has been recognized as a factor in job performance and general habitability.

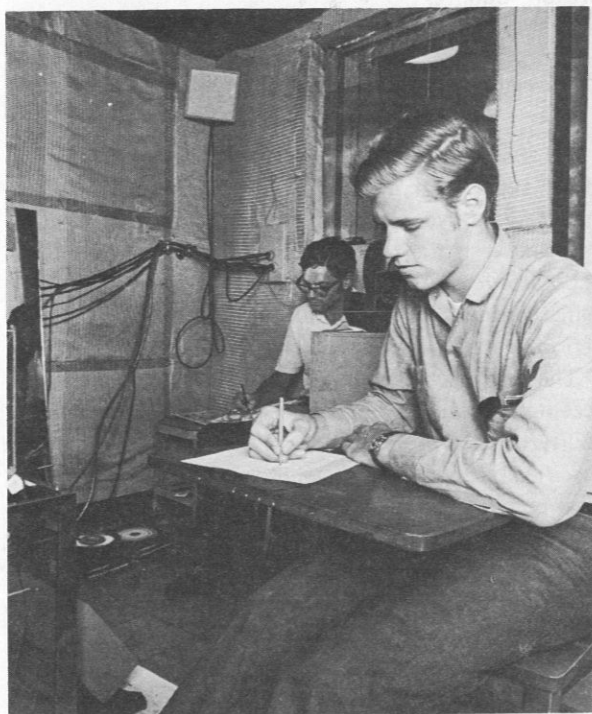
The spaces being used for this study have been arranged in such a manner as to simulate actual living conditions on board a submarine. Five of the ten young volunteers are Navy enlisted petty officers; five are civilians.

In addition to exposure to an around-the-clock ping-pong noise of a penetrating frequency for 25 days of their 30-day confinement period, the men in this study will undergo a series of physiological and psychological tests.

The study was initiated at the direction of CDR J.D. Bloom, MC, USN, Officer-in-Charge of the Naval Submarine Medical Research Laboratory. Dr. J. Donald Harris, chief of the Physiopsychological Division of the Laboratory is directing the project, and Mr. Charles R. Carey of the Environmental Physiology Branch is Program Manager. Included in the planning of the study were representatives of the Navy Underwater Systems Center's New London Laboratory, and Submarine Development Group Two at the Submarine Base.

A daily routine has been set up along military lines, the purpose being to simulate as closely as practicable an actual shipboard submarine regimen without upsetting accurate experimental controls for the study. The selection of the specific experimental tests was arrived at through benefit of experience gained in an earlier study conducted at the Laboratory on the effects of a similar exposure to sonar noise, but for a much shorter period. This pilot study was conducted

in October of 1970, with the subjects confined for eight days, and exposed to sonar noise for five of these days.



Sonar Habitability Study: Petty Officer third class Hal J. Christenson takes psychological test in the Sound Suite, SUB-MEDRSCHLAB.

The sonar signal used in this study is a recording of sonar emissions from within an actively pinging submarine. It is played throughout all spaces in the Sound Suite where the subjects participating in this study are living. A sonar pulse is presented once every 60 seconds.

Dr. Harris explained that advanced echo-ranging systems, such as are expected to be carried by future submarines, would radiate very intense sounds in the water. A portion of the energy of the sonar signal would be transmitted back from the water through the hull of the submarine and could be heard by the crew members as a loud, whistle-like sound. In typical operations, a submarine would echo-range continuously for several days seeking out underwater targets. Thus, the crewmen would be exposed to the sonar noise while on duty and off duty, while eating and sleeping.

Members of the scientific staff representing all nine of the major research branches of the Naval Submarine Medical Research Laboratory, (Bio-engineering, Auditory, Vision, Human Factors, Biochemistry, Military Applications, Environmental Physiology, Stress and Fatigue Evaluation, and Data Processing), will be responsible for specific testing related to their particular specialty.

Results of this experiment will have far-reaching value for the well-being of Navy personnel in ship design and habitability.—PAO, Nav Sub Med Center, Nav Sub Base, New London Groton, Conn. 🇺🇸

"In what is largely an antimilitary environment today, the military man must retain his high professional integrity. In an environment where faith in the purpose of the Republic is flagging, his belief in its durability must be uncompromising."

—Congressman G. William Whitehurst, (AFPS) 🇺🇸

"If we stand idly by . . . if we shrink from the hard contests where men must win at hazard of their lives and at the risk of all they hold dear, then the bolder and stronger peoples will pass us by, and will win themselves the domination of the world."

—Theodore Roosevelt. (AFPS) 🇺🇸

United States Navy Medicine

CORRESPONDENCE AND CONTRIBUTIONS from the field are welcomed and will be published as space permits, subject to editing and possible abridgment. All material should be submitted to the Editor, U.S. Navy Medicine, Code 18, Bureau of Medicine and Surgery, Washington, D.C. 20390

NOTICES should be received not later than the third day of the month preceding the month of publication.

PROFESSIONAL PAPERS AND ARTICLES should be typewritten on one side of the paper, double spaced, with liberal margins. Original and one carbon copy are required. Generic names of drugs are preferred. If the author's present affiliation differs from that under which the reported work was done, both should be given. Unless otherwise indicated, it will be assumed that the article presented has not been previously printed or delivered elsewhere. Papers which have been delivered or printed elsewhere, covered by copyright, cannot be reprinted in Navy Medicine without the written permission of the author(s) and copyright holder. It is the responsibility of the author(s) to inform U.S. Navy Medicine when the material submitted has been previously used or copyrighted. Navy Medicine will be happy to request permission to reprint from the copyright holder when this is necessary.

ILLUSTRATIONS are acceptable when they substantially contribute to the understanding of the basic material. Only distinct, glossy, black and white **PHOTOGRAPHS** which are functional can be printed. Prints should not be mounted, stapled, clipped or otherwise deformed and can be marked lightly on the back with the figure number. Legends should be typed consecutively on a separate paper with the indicated figures; credits for the photography may also be included. Identities of patients should be masked. **DRAWINGS, TABLES AND GRAPHS** should be minimal in number and properly labeled. They should be neatly done in heavy black ink on white paper, one to a page.

SUGGESTIONS are invited concerning U.S. Navy Medicine, its content and form.



Board of Admiralty Seal

A representation of the first "Navy" seal adopted by the Continental Congress on 4 May 1780, was based on sources of information contained in the Rough Journals of the Continental Congress and other contemporary references. The seal was constructed as pictured here for the late President Kennedy at the request of the Secretary of the Navy.

U.S. NAVAL PUBLICATIONS and FORMS CENTER
ATTN: CODE 306
5801 Tabor Avenue
Philadelphia, Pa. 19120
Official Business

POSTAGE AND FEES PAID
NAVY DEPARTMENT

U.S. NAVY MEDICINE